

Type-1

Field ID	Mnemonic	XML element name	Cardinality
		itl:PackageInformationRecord	1..1
1.001		biom:RecordCategoryCode	1..1
-	-	biom:Transaction	1..1
1.005	DAT	biom:TransactionDate	1..1
-	-	biom:TransactionDestinationOrganization	1..1
1.007	DAI	nc:OrganizationIdentification	1..1
1.017	DAN	nc:OrganizationName	0..1
-	-	biom:TransactionOriginatingOrganization	1..1
1.008	ORI	nc:OrganizationIdentification	1..1
1.017	OAN	nc:OrganizationName	0..1
1.014	GMT	biom:TransactionUTCDate	0..1
1.009	TCN	biom:TransactionControlIdentification	1..1
1.010	TCR	biom:TransactionControlReferenceIdentification	0..1
1.013	DOM	biom:TransactionDomain	0..1
"	DVN	biom:DomainVersionNumberIdentification	0..1
"	DNM	biom:TransactionDomainName	1..1
1.016	APS	biom:TransactionApplicationProfile	0..99
"	APO	biom:ApplicationProfileOrganizationName	1..1
"	APN	biom:ApplicationProfileName	1..1
"	APV	biom:ApplicationProfileVersionIdentification	1..1
-		biom:TransactionImageResolutionDetails	1..1
1.011	NSR	biom:NativeScanningResolutionValue	1..1
1.012	NTR	biom:NominalTransmittingResolutionValue	1..1
1.002	VER	biom:TransactionMajorVersionValue ¹	1..1
1.002	VER	biom:TransactionMinorVersionValue ²	1..1
1.006	PRY	biom:TransactionPriorityValue	0..1
1.004	TOT	biom:TransactionCategory ³	1..1
1.003	CNT	biom:TransactionContentSummary	1..1
"	FRC	biom:ContentFirstRecordCategoryCode	1..1
"	CRC	biom:ContentRecordQuantity	1..1
"	-	biom:ContentRecordSummary ⁴	1..*

1 This element contains the first 2 characters of **Field 1.002 Version number / VER.**

2 This element contains the last 2 characters of **Field 1.002 Version number / VER..**

3 This element is abstract and must be substituted either with biom:TransactionCategoryCode or a user-defined element that is in the substitution group of biom:TransactionCategory

Field ID	Mnemonic	XML element name	Cardinality
"	IDC	biom:ImageReferenceIdentification	1..1
"	REC	biom:RecordCategoryCode	1..1
1.015	DCS	biom:TransactionCharacterSetDirectory	0..1
"	CSN	biom:CharacterSetCommonNameCode	1..1
"	CSI	biom:CharacterSetIndexCode	1..1
"	CSV	biom:CharacterSetVersionIdentification	0..1
1.018 ⁵	GNS	biom:TransactionGeographicNameSetCode	0..1

Type-2

Field ID	Mnemonic	XML element name	Cardinality
		itl:PackageDescriptiveTextRecord	0..*
2.001	-	biom:RecordCategoryCode	1..1
2.002	IDC	biom:ImageReferenceIdentification	1..1
2.003+	-	itl:UserDefinedDescriptiveDetail	0..1
"	"	itl:DomainDefinedDescriptiveDetail ⁶	1..1
"	"	itl:OtherDescriptiveDetail ⁶	0..*

Type-4

Field ID	Mnemonic	XML element name	Cardinality
		itl:PackageHighResolutionGrayscaleImageRecord	0..*
4.001	-	biom:RecordCategoryCode	1..1
4.002	IDC	biom:ImageReferenceIdentification	1..1
-	-	biom:FingerprintImage	1..1
4.009	DATA	nc:BinaryBase64Object	1..1
-	-	biom:ImageCaptureDetail	1..1
4.005	ISR	biom:CaptureResolutionCode	1..1
4.008	CGA ⁷	biom:ImageCompressionAlgorithmCode	1..1
4.006	HLL	biom:ImageHorizontalLineLengthPixelQuantity	1..1
4.007	VLL	biom:ImageVerticalLineLengthPixelQuantity	1..1
-	-	biom:FingerprintImagePosition	1..1
4.004	FGP	biom:FingerPositionCode	1..6
4.003	IMP	biom:FingerprintImageImpressionCaptureCategoryCode	1..1

4 This element repeats for each subfield of **Field 1.003 Transaction content / CNT** after the first one.

5 [2013n>] This is a new field [<2013n]

6 This element is abstract and must be substituted with a user-defined element.

7 [2013e>] Mnemonic corrected [<2013e]

Type-7

Field ID	Mnemonic	XML element name	Cardinality
		itl:PackageUserDefinedImageRecord	0..*
7.001	-	biom:RecordCategoryCode	1..1
7.002	IDC	biom:ImageReferenceIdentification	1..1
7.003+	-	biom:BiometricImage ⁸	0..1

Type-8

Field ID	Mnemonic	XML element name	Cardinality
		itl:PackageSignatureImageRecord	0..*
8.001	-	biom:RecordCategoryCode	1..1
8.002	IDC	biom:ImageReferenceIdentification	1..1
-	-	biom:SignatureImage	1..1
8.008	DATA	nc:BinaryBase64Object	0..1 ⁹
-	-	biom:ImageCaptureDetail	1..1
8.005	ISR	biom:CaptureResolutionCode	1..1
8.006	HLL	biom:ImageHorizontalLineLengthPixelQuantity	1..1
8.007	VLL	biom:ImageVerticalLineLengthPixelQuantity	1..1
8.008	DATA	biom:SignatureImageVectorRepresentation	0..1 ¹⁰
"	"	biom:SignatureImageVector ¹¹	2..*
"	"	biom:VectorPenPressureValue ¹²	1..1
"	"	biom:VectorPositionVerticalCoordinateValue ¹³	1..1
"	"	biom:VectorPositionHorizontalCoordinateValue ¹⁴	1..1
8.004	SRT	biom:SignatureRepresentationCode	1..1
8.003	SIG	biom:SignatureCategoryCode	1..1

Type-9

Field ID	Mnemonic	XML element name	Cardinality
		itl:PackageMinutiaeRecord	0..*
9.001	-	biom:RecordCategoryCode	1..1
9.002	IDC	biom:ImageReferenceIdentification	1..1
9.902	ANN	biom:ProcessAnnotation	0..*
"	GMT	biom:ProcessUTCDate	1..1
"	NAV	biom:ProcessName	1..1

⁸ This element is abstract. Implementations may use any element substitutable for biom:BiometricImage or a user-defined element that is in the substitution group of itl:UserDefinedImage.

⁹ If the **SRT** field is "0" or "1", this element is mandatory; otherwise it shall not appear.

Field ID	Mnemonic	XML element name	Cardinality
"	OWN	biom:ProcessOwnerText	1..1
"	PRO	biom:ProcessDescriptionText	1..1
9.003	IMP	biom:MinutiaeImpressionCaptureCategoryCode	1..1
9.004	FMT	biom:MinutiaeFormatNISTStandardIndicator ¹⁵	1..1
9.901	ULA	biom:MinutiaeUniversalLatentWorkstationAnnotationText	0..*
-	-	biom:BiometricCaptureDetail	0..1
9.903	DUI	biom:CaptureDeviceIdentification	0..1
9.904	MMS	-	
"	MAK	biom:CaptureDeviceMakeText	0..1
"	MOD	biom:CaptureDeviceModelText	0..1
"	SER	biom:CaptureDeviceSerialNumberText	0..1
9.013- 9.125, 9.151- 9.175, 9.180- 9.225	-	biom:RecordMinutiae ¹⁶	0..*
-	-	itl:Minutiae ¹⁷	0..*
-	-	itl:MinutiaeNISTStandard	1..1
9.012	MRC	itl:MinutiaDetail	1..*
"	-	biom:PositionHorizontalCoordinateValue	1..1
"	-	biom:PositionVerticalCoordinateValue	1..1
"	-	biom:MinutiaIdentification	1..1
"	-	biom:PositionThetaAngleMeasure	1..1
"	-	biom:MinutiaQualityValue	0..1
"	-	biom:MinutiaCategoryCode	0..1
"	-	biom:MinutiaRidgeCount	0..*
"	-	biom:RidgeCountReferenceIdentification	1..1
"	-	biom:RidgeCountValue	1..1
9.010	MIN	biom:MinutiaeQuantity	1..1

10 If the **SRT** field contains the value of "2", this element is mandatory; otherwise it shall not appear.

11 Each occurrence of this element represents a single vector in the list, as specified in the description of **Field 8.008: Signature image data / DATA**.

12 The pen pressure value of line segments within the signature, as specified in the description of **Field 8.008: Signature image data / DATA**.

13 A vertical (Y) coordinate value, as specified in the description of **Field 8.008: Signature image data / DATA**.

14 A horizontal (X) coordinate value, as specified in the description of **Field 8.008: Signature image data / DATA**.

15 The value "U" from the description of **Field 9.004: Minutiae format / FMT** maps to the value "false" in the XML, and the value "S" from the description of **field 9.004** maps to the value "true" in the XML.

16 This element is abstract and must be substituted with a user-defined element.

17 itl:Minutiae (and its contents) are legacy; Shall be used only for legacy data.

Field ID	Mnemonic	XML element name	Cardinality
9.005	OFR	biom:MinutiaeReadingSystem	0..1
"	-	biom:ReadingSystemCodingMethodCode	1..1
"	-	biom:ReadingSystemName	1..1
"	-	biom:ReadingSystemSubsystemIdentification	0..1
9.011	RDG	biom:MinutiaeRidgeCountIndicator	1..1
9.008	CRP	biom:MinutiaeFingerCorePosition	0..*
"	MXC	biom:PositionHorizontalCoordinateValue	1..1
"	MYC	biom:PositionVerticalCoordinateValue	1..1
9.009	DLT	biom:MinutiaeFingerDeltaPosition	0..*
"	MXC	biom:PositionHorizontalCoordinateValue	1..1
"	MYC	biom:PositionVerticalCoordinateValue	1..1
9.007	FPC	itl:MinutiaeFingerPatternDetail	0..*
"	-	itl:FingerPatternCodeSourceCode	1..1
"	-	biom:FingerPatternCode	1..*
"	-	biom:FingerPatternText	1..*
9.006	FGP	biom:MinutiaeFingerPositionCode ¹⁸	0..*
9.006	-	biom:MinutiaePalmPositionCode ¹⁹	0..*
-	-	biom:OtherMinutiae	0..1 ²⁰
9.176	OOD	biom:MinutiaeAlgorithmOwnerText	1..1
9.177	PAG	biom:MinutiaeAlgorithm	1..1
"	PAN	biom:MinutiaeAlgorithmName	1..1
"	PAV	biom:MinutiaeAlgorithmVersionText	0..1
9.178	SOD	biom:MinutiaeCaptureDevice	0..1
-	OFN	biom:CaptureDeviceName	1..1
-	OFV	biom:CaptureDeviceVersionText	0..1
		biom:MinutiaeFormatContactOrganization	1..1
9.179	DTX	nc:OrganizationPrimaryContactInformation	1..1
		nc>ContactInformationDescriptionText	1..1
-	-	biom:INCITSMinutiae	0..1 ²¹
9.126	CBI		
"	CFO	biom:CBEFFFormatOwnerIdentification	1..1
"	CFT	biom:CBEFFFormatCategoryIdentification	1..1

18 Use this element when the image represents a fingerprint.

19 Use this element when the image represents a palmprint.

20[2013e>] Since there is no way in Traditional encoding to represent multiple sets of the fields 9.176 -9.225, this is changed to a cardinality of 0..1 in order to maintain interoperability with Traditional Format. [<2013e]

21[2013e>] Cardinality changed from 0..* to 0..1 [<2013e]

Field ID	Mnemonic	XML element name	Cardinality
"	CPI	biom:CBEFFProductIdentification	1..1
9.127	CEI	biom:ImageCaptureDetail	1..1
"	CID	biom:CaptureDeviceIdentification	1..1
"	AFS	biom:CaptureDeviceCertificationCode	1..1
-		biom:FingerImpressionImage	1..1
9.128	HLL	biom:ImageHorizontalLineLengthPixelQuantity	1..1
9.131	THPS	biom:ImageHorizontalPixelDensityValue	1..1
9.130	SLC	biom:ImageScaleUnitsCode	1..1
9.129	VLL	biom:ImageVerticalLineLengthPixelQuantity	1..1
9.132	TVPS	biom:ImageVerticalPixelDensityValue	1..1
9.134	FGP	biom:FingerPositionCode	1..1
9.133	FVW	biom:FingerViewNumeric	1..1
9.135	FQD	biom:MinutiaeQuality	1..9
"	QAP	biom:QualityAlgorithmProductIdentification	0..1
"	QVU	biom:QualityValue	1..1
"	QAV	biom:QualityAlgorithmVendorIdentification	0..1
9.136	NOM	biom:MinutiaeQuantity	1..1
9.137	FMD	biom:INCITSMinutia	1..9999 ²²
"	MAN	biom:MinutiaIdentification	1..1
"	-	biom:INCITSMinutiaLocation	1..1
"	MXC	biom:PositionHorizontalCoordinateValue	1..1
"	MYC	biom:PositionVerticalCoordinateValue	1..1
"	MAV	biom:ImageLocationThetaAngleMeasure	1..1
"	M1M	biom:INCITSMinutiaCategoryCode	1..1
"	QOM	biom:MinutiaQualityValue	1..1
9.138	RCI	biom:MinutiaeRidgeCountDetail	0..1
"	REM	biom:INCITSRidgeCountAlgorithmCode	1..1
"	-	biom:MinutiaeRidgeCountItem	1..*
"	CMI	biom:MinutiaIdentification	1..1
"	NMN	biom:MinutiaReferenceIdentification	1..1
"	NRC	biom:RidgeCountValue	1..1
9.139	CIN	biom:FingerprintPatternCoreLocation	0..9
"	XCC	biom:PositionHorizontalCoordinateValue	1..1
"	YCC	biom:PositionVerticalCoordinateValue	1..1
"	ANGC	biom:ImageLocationThetaAngleMeasure	1..1
9.140	DIN	biom:FingerprintPatternDeltaLocation	0..9

[22[2013e>] Cardinality changed from 1..* to 1..9999 for consistency with Traditional Encoding [<2013e]

Field ID	Mnemonic	XML element name	Cardinality
"	XCD	biom:PositionHorizontalCoordinateValue	1..1
"	YCD	biom:PositionVerticalCoordinateValue	1..1
"	ANG1	biom:ImageLocationThetaAngleMeasure	1..1
9.141	ANG2	biom:ImageLocationThetaAngleMeasure	1..1
"	ANG3	biom:ImageLocationThetaAngleMeasure	1..1
-	-	biom:ExtendedFeatureSetMinutiae	0..1 ²³
9.303	FSP	biom:ExtendedFeatureSetProfileIdentification	0..9
9.300	ROI	biom:FrictionRidgeImageRegionOfInterest	1..1
"	EWI	biom:ImageSegmentWidthMeasure	1..1
"	EHI	biom:ImageSegmentHeightMeasure	1..1
"	EHO	biom:ImageSegmentHorizontalOffsetMeasure	0..1
"	EVO	biom:ImageSegmentVerticalOffsetMeasure	0..1
"	ROP	biom:ImageSegmentPolygon	0..1
"		biom:ImageSegmentVertex	3..99
"		biom:ImageLocationHorizontalCoordinateMeasure	1..1
"		biom:ImageLocationVerticalCoordinateMeasure	1..1
9.301	ORT	biom:FingerprintImageFingerprintOrientation	0..1
"	EOD	biom:OrientationAngleValue	1..1
"	EUC	biom:OrientationAngleUncertaintyValue	0..1
9.302	FPP	biom:MinutiaeFingerLocation ¹⁸	0..20
"	FPP	biom:MinutiaePalmLocation ¹⁹	0..20
"	FPP	biom:MinutiaePlantarLocation ²⁴	0..20
"	FGP	biom:FingerPositionCode ¹⁸	1..1
"	FGP	biom:PalmPositionCode ¹⁹	1..1
"	FGP	biom:PlantarPositionCode ²⁴	1..1
"	FSM	biom:SegmentLocationCode	0..1
"	OCF	biom:FingerprintOffCenterCode	0..1
"	SGP	biom:ImageSegmentPolygon	0..1
"	-	biom:ImageSegmentVertex	3..99
"		biom:ImageLocationHorizontalCoordinateMeasure	1..1
"		biom:ImageLocationVerticalCoordinateMeasure	1..1
9.307	PAT	biom:FingerprintPatternClassification	0..7
"	GCF	biom:FingerprintPatternGeneralClassCode	1..1
"	SUB	biom:FingerprintPatternSubClassCode	0..1
"	WDR	biom:FingerprintPatternWhorlDeltaRelationshipCode	0..1

[23[2013e>] Cardinality changed from 0..* to 0..1 [<2013e]

24 Use this element when the image represents a plantar print.

Field ID	Mnemonic	XML element name	Cardinality
9.309	RQF	biom:MinutiaeRidgeQualityMap	0..1
"	GSZ	biom:MinutiaeRidgeQualityMapCellSizeValue	1..1
"	RDF	biom:MinutiaeRidgeQualityMapFormatCode	1..1
9.308	RQM	biom:MinutiaeRidgeQualityMapRowText	1..*
9.311	RFF	biom:MinutiaeRidgeFlowMap	0..1
"	SFQ	biom:MinutiaeRidgeFlowMapSamplingFrequencyValue	1..1
"	RDF	biom:MinutiaeRidgeFlowMapFormatCode	1..1
9.310	RFM	biom:MinutiaeRidgeFlowMapRowText	1..*
9.313	RWF	biom:MinutiaeRidgeWavelengthMap	0..1
"	FWS	biom:MinutiaeRidgeWavelengthMapSamplingFrequencyValue	1..1
"	FDF	biom:MinutiaeRidgeWavelengthMapFormatCode	1..1
9.312	RWM	biom:MinutiaeRidgeWavelengthMapRowText	1..*
9.314	TRV	biom:FrictionRidgeImageTonalReversalCode	0..1
9.315	PLR	biom:FrictionRidgeImageLateralReversalCode	0..1
9.316	FQM	biom:ImageQuality	0..9
"	QAP	biom:QualityAlgorithmProductIdentification	1..1
"	QVU	biom:QualityValue	1..1
"	QAV	biom:QualityAlgorithmVendorIdentification	1..1
9.317	PGS	biom:MinutiaeGrowthOrShrinkage	0..1
"	TGS	biom:MinutiaeGrowthOrShrinkageCode	1..1
"	CGS	biom:MinutiaeCommentText	0..1
9.325	NCOR	biom:MinutiaeNoCoresPresentIndicator	0..1
9.320	COR	biom:MinutiaeCore	0..*
"	CXC	biom:ImageLocationHorizontalCoordinateMeasure	1..1
"	CYC	biom:ImageLocationVerticalCoordinateMeasure	1..1
"	CDI	biom:MinutiaeCoreDirectionMeasure	0..1
"	RPU	biom:ImageLocationUncertaintyRadiusMeasure	0..1
"	DUY	biom:MinutiaeCoreDirectionUncertaintyValue	0..1
9.326	NDEL	biom:MinutiaeNoDeltasPresentIndicator	0..1
9.321	DEL	biom:MinutiaeDelta	0..*
"	DXC	biom:ImageLocationHorizontalCoordinateMeasure	1..1
"	DYC	biom:ImageLocationVerticalCoordinateMeasure	1..1
"	DUP	biom:MinutiaeDeltaDirectionUpMeasure	0..1
"	DLF	biom:MinutiaeDeltaDirectionLeftMeasure	0..1
"	DRT	biom:MinutiaeDeltaDirectionRightMeasure	0..1
"	DTP	biom:MinutiaeDeltaCategoryCode	0..1

Field ID	Mnemonic	XML element name	Cardinality
"	RPU	biom:ImageLocationUncertaintyRadiusMeasure	0..1
"	DUU	biom:MinutiaeDeltaDirectionUpUncertaintyValue	0..1
"	DUL	biom:MinutiaeDeltaDirectionLeftUncertaintyValue	0..1
"	DUR	biom:MinutiaeDeltaDirectionRightUncertaintyValue	0..1
9.322	CDR	biom:MinutiaeRidgeCountCoreToDelta	0..* ²⁵
"	CIX	biom:MinutiaeCoreIdentification	1..1
"	DIX	biom:MinutiaeDeltaIdentification	1..1
"	MNRC	biom:RidgeCountMinimumValue	1..1
"	MXRC	biom:RidgeCountMaximumValue	0..1
9.323	CPR	biom:FrictionRidgeImageCenter	0..3
"	CPM	biom:FrictionRidgeImageCenterLocationMethodCode	1..1
"	PXC	biom:ImageLocationHorizontalCoordinateMeasure	1..1
"	PYC	biom:ImageLocationVerticalCoordinateMeasure	1..1
"	CRU	biom:ImageLocationUncertaintyRadiusMeasure	0..1
9.327	NDIS	biom:MinutiaeNoDistinctiveFeaturesPresentIndicator	0..1
9.324	DIS	biom:MinutiaeDistinctiveFeature	0..99
"	DIT	biom:MinutiaeDistinctiveFeatureCategoryCode	1..1
"	DFP	biom:ImageSegmentPolygon	0..1
"	-	biom:ImageSegmentVertex	3..99
"		biom:ImageLocationHorizontalCoordinateMeasure	1..1
"		biom:ImageLocationVerticalCoordinateMeasure	1..1
"	DFC	biom:MinutiaeCommentText	0..1
9.334	NMIN	biom:MinutiaeNoMinutiaePresentIndicator	0..1
9.331	MIN	biom:EFSMinutia	0..999
"	MXC	biom:ImageLocationHorizontalCoordinateMeasure	1..1
"	MYC	biom:ImageLocationVerticalCoordinateMeasure	1..1
"	MTD	biom:ImageLocationThetaAngleMeasure	1..1
"	MTY	biom:EFSMinutiaCategoryCode	1..1
"	MRU	biom:ImageLocationUncertaintyRadiusMeasure	0..1
"	MDU	biom:MinutiaDirectionUncertaintyValue	0..1
9.332	MRA	biom:EFSRidgeCountAlgorithmCode	0..1
9.333	MRC	biom:EFSRidgeCountItem	0..* ²⁶
"	MIA	biom:MinutiaeIdentification	1..1
"	MIB	biom:MinutiaeReferenceIdentification	1..1

[25[2013e>] Changed max occurrence from 225 to * [<2013e]

[26[2013e>] Maximum repeat count changed to * [<2013e]

Field ID	Mnemonic	XML element name	Cardinality
"	MIR	biom:RidgeCountValue	1..1
"	MRN	biom:MinutiaeRidgeCountOctantNumeric	0..1
"	MRS	biom:MinutiaeRidgeCountResidualCode	0..1
9.335	RCC	biom:MinutiaeRidgeCountConfidence	0..7992
"	-	biom:MinutiaLocationPoint	1..1
"	ACX	biom:ImageLocationHorizontalCoordinateMeasure	1..1
"	ACY	biom:ImageLocationVerticalCoordinateMeasure	1..1
"	-	biom:MinutiaLocationReferencePoint	1..1
"	BCX	biom:ImageLocationHorizontalCoordinateMeasure	1..1
"	BCY	biom:ImageLocationVerticalCoordinateMeasure	1..1
"	MORC	biom:MinutiaeRidgeCountMethodCode	1..1
"	MCV	biom:MinutiaeRidgeCountConfidenceValue	1..1
9.346	NDOT	biom:MinutiaeNoDotsPresentIndicator	0..1
9.340	DOT	biom:MinutiaeDot	0..999
"	DOX	biom:ImageLocationHorizontalCoordinateMeasure	1..1
"	DOY	biom:ImageLocationVerticalCoordinateMeasure	1..1
"	DOL	biom:MinutiaeDotLengthMeasure	0..1
9.347	NINR	biom:MinutiaeNoIncipientRidgesPresentIndicator	0..1
9.341	INR	biom:MinutiaeIncipientRidge	0..999
"	-	biom:MinutiaLocationPoint	1..1
"	X1C	biom:ImageLocationHorizontalCoordinateMeasure	1..1
"	Y1C	biom:ImageLocationVerticalCoordinateMeasure	1..1
		biom:MinutiaLocationReferencePoint	1..1
"	X2C	biom:ImageLocationHorizontalCoordinateMeasure	1..1
"	Y2C	biom:ImageLocationVerticalCoordinateMeasure	1..1
9.348	NCLD	biom:MinutiaeNoCreasesPresentIndicator	0..1
9.342	CLD	biom:MinutiaeFlexionCrease	0..999
"	-	biom:MinutiaLocationPoint	1..1
"	X1D	biom:ImageLocationHorizontalCoordinateMeasure	1..1
"	Y1D	biom:ImageLocationVerticalCoordinateMeasure	1..1
"	-	biom:MinutiaLocationReferencePoint	1..1
"	X2D	biom:ImageLocationHorizontalCoordinateMeasure	1..1
"	Y2D	biom:ImageLocationVerticalCoordinateMeasure	1..1
"	TPD	biom:MinutiaeFlexionCreaseCategoryCode	1..1
9.349	NREF	biom:MinutiaeNoRidgeEdgeFeaturesPresentIndicator	0..1
9.343	REF	biom:MinutiaeRidgeEdgeOrDiscontinuity	0..999
"	CLX	biom:ImageLocationHorizontalCoordinateMeasure	1..1

Field ID	Mnemonic	XML element name	Cardinality
"	CLY	biom:ImageLocationVerticalCoordinateMeasure	1..1
"	CLT	biom:MinutiaeRidgeEdgeOrDiscontinuityCategoryCode	1..1
9.344	NPOR	biom:MinutiaeNoPoresPresentIndicator	0..1
9.345	POR	biom:MinutiaePore	0..9999
"	POX	biom:ImageLocationHorizontalCoordinateMeasure	1..1
"	POY	biom:ImageLocationVerticalCoordinateMeasure	1..1
9.350	MFD	biom:MinutiaeFeatureDetection	0..99
"	FIE	biom:MinutiaeFeatureDetectionFieldListText	1..1
"	FME	biom:MinutiaeFeatureDetectionMethodCode	1..1
"	FAV	biom:MinutiaeAlgorithmVendorIdentification	0..1
"	FAL	biom:MinutiaeAlgorithmIdentification	0..1
"	-	biom:MinutiaeExaminer	0..1
"	-	nc:PersonName	0..1
"	EGN	nc:PersonGivenName	0..1
"	ESN	nc:PersonSurname	0..1
"	-	biom:MinutiaeExaminerAffiliation	0..1
"	EAF	nc:OrganizationName	0..1
"	EMT	biom:MinutiaeFeatureDetectionDateTime	0..1
"	NTS	biom:MinutiaeCommentText	0..1
9.351	COM	biom:MinutiaeCommentText	0..1
9.352	LPM	biom:LatentProcessingCategoryCode	0..9
9.353	EAA	biom:MinutiaeValueAssessment	0..1
"	AAV	biom:MinutiaeValueAssessmentResultCode	1..1
"	-	biom:MinutiaeExaminer	1..1
"	-	nc:PersonName	1..1
"	AFN	nc:PersonGivenName	1..1
"	ALN	nc:PersonSurname	1..1
"	-	biom:MinutiaeExaminerAffiliation	1..1
"	AAF	nc:OrganizationName	1..1
"	AMT	biom:MinutiaeValueAssessmentDateTime	1..1
"	CXF	biom:MinutiaeAnalysisComplexityCode	0..1
"	ACM	biom:MinutiaeCommentText	0..1
9.354	EOF	biom:MinutiaeFraudEvidence	0..4
"	FRA	biom:MinutiaeFraudEvidenceCategoryCode	1..1
"	CFD	biom:MinutiaeCommentText	0..1
9.355	LSB	biom:MinutiaeLatentSubstrate	0..3
"	CLS	biom:MinutiaeLatentSubstrateCategoryCode	1..1

Field ID	Mnemonic	XML element name	Cardinality
"	OSD	biom:MinutiaeLatentSubstrateDescriptionText	0..1
9.356	LMT	biom:MinutiaeLatentMatrix	0..3
"	TOM	biom:MinutiaeLatentMatrixCategoryCode	1..1
"	CLA	biom:MinutiaeCommentText	0..1
9.357	LQI	biom:MinutiaeLocalQualityIssues	0..*
"	LQT	biom:MinutiaeLocalQualityIssuesCategoryCode	1..1
"	LQP	biom:ImageSegmentPolygon	1..1
"	-	biom:ImageSegmentVertex	3..99
"		biom:ImageLocationHorizontalCoordinateMeasure	1..1
"		biom:ImageLocationVerticalCoordinateMeasure	1..1
"	LQC	biom:MinutiaeCommentText	0..1
9.360	AOC	biom:FrictionRidgeImageAreaOfCorrespondence	0..*
"	CIR	biom:ImageReferenceIdentification	1..1
"	AOP	biom:ImageSegmentPolygon	1..1
"	-	biom:ImageSegmentVertex	3..99
"		biom:ImageLocationHorizontalCoordinateMeasure	1..1
"		biom:ImageLocationVerticalCoordinateMeasure	1..1
"	CAC	biom:MinutiaeCommentText	0..1
9.361	CPF	biom:MinutiaeFeatureCorrespondence	0..*
"	COL	biom:MinutiaeFeatureIdentification	1..1
"	TOC	biom:MinutiaeFeatureCorrespondenceCategoryCode	1..1
"	CFN	biom:MinutiaeFeatureCategoryCode	0..1
"	FOC	biom:MinutiaeFeatureReferenceIdentification	0..1
"	CXC	biom:ImageLocationHorizontalCoordinateMeasure	0..1
"	CYC	biom:ImageLocationVerticalCoordinateMeasure	0..1
"	COC	biom:MinutiaeCommentText	0..1
9.362	ECD	biom:MinutiaeExaminerComparisonDetermination	0..*
"	EDC	biom:ImageReferenceIdentification	1..1
"	EDE	biom:MinutiaeExaminerComparisonDeterminationResultCode	1..1
"	WIP	biom:MinutiaeExaminerProgressCode	1..1
"	-	biom:MinutiaeExaminer	1..1
"	-	nc:PersonName	1..1
"	EFN	nc:PersonGivenName	1..1
"	ELN	nc:PersonSurname	1..1
"	-	biom:MinutiaeExaminerAffiliation	1..1
"	EAF	nc:OrganizationName	1..1 ²⁷

Field ID	Mnemonic	XML element name	Cardinality
"	DTG	biom:MinutiaeExaminerComparisonDeterminationDateTime	1..1
"	CCF	biom:MinutiaeComparisonComplexityCode	0..1
"	CZZ	biom:MinutiaeCommentText	0..1
9.363	RRC	biom:FrictionRidgeImageRelativeRotation	0..*
"	RIR	biom:ImageReferenceIdentification	1..1
"	ROR	biom:ImageRelativeOverallRotationValue	1..1
9.372	SIM	biom:FrictionRidgeSkeletonizedImageBinaryObject	0..1
9.373	RPS	biom:MinutiaeImageRidgePathRepresentation	0..1
"		biom:MinutiaeRidgePathSegment	1..*
"	-	biom:ImageSegmentVertex	2..99
"		biom:ImageLocationHorizontalCoordinateMeasure	1..1
"		biom:ImageLocationVerticalCoordinateMeasure	1..1
9.380 ²⁸	TPL	biom:EFSTemporaryLine	0..999
"	TXA	biom:ImageLocationHorizontalCoordinateMeasure	1..1
"	TYA	biom:ImageLocationVerticalCoordinateMeasure	1..1
"	TXB	biom:ImageLocationHorizontalCoordinateMeasure	1..1
"	TYB	biom:ImageLocationVerticalCoordinateMeasure	1..1
"	TLC	biom:TemporaryLineColorValue	1..1
"	TLT	biom:TemporaryLineThicknessValue	1..1
9.381 ²⁹	FCC	biom:EFSFeatureColor	0..999
"	FTF	biom:FeatureColorFieldReferencedCode	1..1
"	FTO	biom:FeatureColorFieldOccurrenceReferenced	1..1
"	FTC	biom:FeatureColorHexidecimalValue	0..1
"	COM	biom:FeatureColorCommentText	0..1

Type-10

Field ID	Mnemonic	XML element name	Cardinality
		itl:PackageFacialAndSMTImageRecord	0..*
10.001	-	biom:RecordCategoryCode	1..1

[27[2013e>] changed from 0..1 to 1..1 [<2013e]

[28[2013n>] New Field [<2013n]

[29[2013n>] New Field [<2013n]

Field ID	Mnemonic	XML element name	Cardinality
10.002	IDC	biom:ImageReferenceIdentification	1..1
10.992 ³⁰	T2C	biom:Type2CrossReferenceIdentification	1..1
10.200- 10.900	UDF	itl:UserDefinedFields ³¹	0..*
10.902	ANN	biom:ProcessAnnotation	0..*
"	GMT	biom:ProcessUTCDate	1..1
"	NAV	biom:ProcessName	1..1
"	OWN	biom:ProcessOwnerText	1..1
"	PRO	biom:ProcessDescriptionText	1..1
10.995	ASC	biom:AssociatedContext	0..255
"	ACN	biom:ContextIdentification	1..1
"	ASP	biom:ImageSegmentIdentification	0..1
10.996	HAS	biom:ImageHashValue	0..1
10.997	SOR	biom:SourceRepresentation	0..255
"	SRN	biom:SourceIdentification	1..1
"	RSP	biom:ImageSegmentIdentification	0..1
-	-	biom:FaceImage ³²	0..1 ³³
-	-	biom:PhysicalFeatureImage ³⁴	0..1
10.999	DATA	nc:BinaryBase64Object	1..1
-	-	biom:ImageCaptureDetail	1..1
10.998	GEO	biom:CaptureLocation	0..1
"	GRT	nc:LocationDescriptionText	0..*
"	-	nc:LocationGeographicElevation	0..1
"	ELE	nc:MeasurePointValue	1..1
"	-	biom:LocationTwoDimensionalGeographicCoordinate	0..1
"	-	nc:GeographicCoordinateLatitude	1..1
"	LTD	nc:LatitudeDegreeValue	1..1
"	LTM	nc:LatitudeMinuteValue	0..1
"	LTS	nc:LatitudeSecondValue	0..1
"	-	nc:GeographicCoordinateLongitude	1..1

³⁰[2013n>] New Field [<2013n]

³¹ This element is abstract and must be substituted with a user-defined element.

³² If the **IMT** field contains the value "FACE", this element is mandatory; otherwise it shall not appear.

³³ One and only one of biom:FaceImage or biom:PhysicalFeatureImage must appear.

³⁴ If the **IMT** field does *not* contain the value "FACE", this element is mandatory; otherwise it shall not appear.

Field ID	Mnemonic	XML element name	Cardinality
"	LGD	nc:LongitudeDegreeValue	1..1
"	LGM	nc:LongitudeMinuteValue	0..1
"	LGS	nc:LongitudeSecondValue	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemCode ³⁵	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemName ³⁶	0..1
"	-	nc:LocationUTMCoordinate	0..1
"	GCE	nc:UTMEastingValue	1..1
"	GCM	nc:UTMGridZoneID	1..1
"	GCN	nc:UTMNorthingValue	1..1
"	-	biom:LocationAlternateGeographicSystemValue	0..1
"	OSI	biom:GeographicLocationSystemName	1..1
"	OCV	biom:GeographicLocationText	1..1
"	UTE	biom:CaptureUTCDate Time	0..1
10.005	PHD	biom:CaptureDate	1..1
10.903	DUI	biom:CaptureDeviceIdentification	0..1
10.904	MMS	-	
"	MAK	biom:CaptureDeviceMakeText	0..1
"	MOD	biom:CaptureDeviceModelText	0..1
"	SER	biom:CaptureDeviceSerialNumberText	0..1
10.016	SHPS	biom:CaptureHorizontalPixelDensityValue	0..1
-	-	biom:CaptureOrganization	1..1
10.004	SRC	nc:OrganizationIdentification	1..1
10.993	SAN	nc:OrganizationName	0..1
10.017	SVPS	biom:CaptureVerticalPixelDensityValue	0..1
10.030	DMM	biom:CaptureDeviceMonitoringModeCode	0..1
10.012	CSP	biom:ImageColorSpaceCode	1..1
10.038	COM	biom:ImageCommentText	0..1
10.011	CGA	biom:ImageCompressionAlgorithmText	1..1
10.006	HLL	biom:ImageHorizontalLineLengthPixelQuantity	1..1
10.009	THPS	biom:ImageHorizontalPixelDensityValue	1..1
10.024	SQS	biom:ImageQuality	0..9
"	QAP	biom:QualityAlgorithmProductIdentification	1..1
"	QVU	biom:QualityValue	1..1

35 Used for specific values in **Table 6 of ANSI/NIST-ITL 1-2011 Update:2013**.

36 Used for user-defined "other" values (entries up to 6 characters).

Field ID	Mnemonic	XML element name	Cardinality
"	QAV	biom:QualityAlgorithmVendorIdentification	1..1
10.008	SLC	biom:ImageScaleUnitsCode	1..1
10.003	IMT	biom:ImageCategoryCode	1..1
10.007	VLL	biom:ImageVerticalLineLengthPixelQuantity	1..1
10.010	TVPS	biom:ImageVerticalPixelDensityValue	1..1
10.018	DIST	biom:ImageDistortion	0..1
"	IDK	biom:ImageDistortionCategoryCode	1..1
"	IDM	biom:ImageDistortionMeasurementCode	1..1
"	DSC	biom:ImageDistortionSeverityCode	1..1
10.025	SPA	biom:FaceImage3DPoseAngle	0..1
"	PIT	biom:PosePitchAngleMeasure	1..1
"	PITU	biom:PosePitchUncertaintyValue	0..1
"	ROL	biom:PoseRollAngleMeasure	1..1
"	ROLU	biom:PoseRollUncertaintyValue	0..1
"	YAW	biom:PoseYawAngleMeasure	1..1
"	YAWU	biom:PoseYawUncertaintyValue	0..1
10.013	SAP	biom:FaceImageAcquisitionProfileCode	0..1
10.022 ³⁷	PXS	biom:FaceImageAttribute	0..9
"	PXS	biom:FaceImageAttributeCode	1..1
"	PXS	biom:FaceImageAttributeText	0..1
10.026	SXS	biom:FaceImageDescriptionCode ³⁸	0..50
10.026	SXS	biom:FaceImageDescriptionText ³⁹	0..50
10.027	SEC	biom:FaceImageEyeColorAttributeCode	0..1
10.029	FFP	biom:FaceImageFeaturePoint	0..88
"	HCX	biom:FeaturePointHorizontalCoordinateValue	1..1
"	FPC	biom:FeaturePointIdentification	1..1
"	FPT	biom:FeaturePointCategoryCode	1..1
"	HCY	biom:FeaturePointVerticalCoordinateValue	1..1
10.028	SHC	biom:FaceImageHairColorAttributeCode	0..2
10.021	POA	biom:FaceImagePoseOffsetAngleMeasure	0..1
10.020	POS	biom:FaceImageSubjectPoseCode	0..1
10.023	PAS	biom:FaceImageAcquisitionSource	0..1
"	PAC	biom:CaptureSourceCode	1..1

37 For legacy use only.

38 Use this element when the value is explicitly specified in **Table 63 of ANSI/NIST-ITL 1-2011 Update:2013, Subject facial description codes**, or is a physical characteristic from **Annex D**.

39 Use this element when the value is unformatted text (identified as "Other characteristics" in **Table 63 of ANSI/NIST-ITL 1-2011 Update:2013, Subject facial description codes**).

Field ID	Mnemonic	XML element name	Cardinality
"	VSD	biom:CaptureSourceDescriptionText	0..1
10.014	FIP	biom:FaceImageBoundingSquare	0..1
"	BBC	biom:FaceImageBoundingCategoryCode	0..1
"	BVC	biom:SegmentBottomVerticalCoordinateValue	1..1
"	LHC	biom:SegmentLeftHorizontalCoordinateValue	1..1
"	RHC	biom:SegmentRightHorizontalCoordinateValue	1..1
"	TVC	biom:SegmentTopVerticalCoordinateValue	1..1
10.015	FPFI	biom:FaceImageBoundary	0..1
"	BYC	biom:FaceImageBoundaryShapeCode	1..1
"	NOP	biom:PositionPolygonVertexQuantity	1..1
"	-	biom:PositionPolygonVertex	2..99
"	HPO	biom:PositionHorizontalCoordinateValue	1..1
"	VPO	biom:PositionVerticalCoordinateValue	1..1
10.019	LAF	biom:FaceImageLightingArtifactsCode	0..3
10.031	TMC	biom:FaceImageFeaturePointTierCode ⁴⁰	0..1
"	TMC	biom:FaceImageFeaturePointTierNumeric ⁴¹	0..1
10.032	3DF ⁴²	biom:FaceImage3DFeaturePoint	0..88
"	HCX	biom:FeaturePointHorizontalCoordinateValue	1..1
"	FPC	biom:FeaturePointIdentification	1..1
"	FPT	biom:FeaturePointCategoryCode	1..1
"	HCY	biom:FeaturePointVerticalCoordinateValue	1..1
"	HCZ	biom:FeaturePointZCoordinateValue	1..1
10.033	FEC	biom:FaceImageContour	0..12
"	FCC	biom:FaceImageContourCategoryCode	1..1
"	NOP	biom:PositionPolygonVertexQuantity	1..1
"	-	biom:PositionPolygonVertex	3..99
"	HPO	biom:PositionHorizontalCoordinateValue	1..1
"	VPO	biom:PositionVerticalCoordinateValue	1..1
10.045	OCC	biom:FaceImageOcclusion	0..16
"	OCY	biom:FaceImageOcclusionOpacityCode	1..1
"	OCT	biom:FaceImageOcclusionCategoryCode	1..1
"	NOP	biom:PositionPolygonVertexQuantity	1..1
"	-	biom:PositionPolygonVertex	3..99

40 Use this element when the value is explicitly listed in **Table 67 of ANSI/NIST-ITL 1-2011 Update:2013 Tiered markup collections (frontal)**.

41 Use this element for user-defined values.

42 [2013e>] Corrected typographical error [<2013e]

Field ID	Mnemonic	XML element name	Cardinality
"	HPO	biom:PositionHorizontalCoordinateValue	1..1
"	VPO	biom:PositionVerticalCoordinateValue	1..1
-	-	biom:PhysicalFeatureDescriptionDetail	0..9
10.043	COL	biom:PhysicalFeatureColorDetail	0..1
"	TC1	biom:PhysicalFeaturePrimaryColorCode	1..1
"	TC2, TC3, TC4, TC5, TC6	biom:PhysicalFeatureSecondaryColorCode ⁴³	0..5
10.042	SMD	-	
"	SMI	biom:PhysicalFeatureCategoryCode	1..1
"	TAC	biom:PhysicalFeatureClassCode	0..1
"	TDS	biom:PhysicalFeatureDescriptionText	0..1
"	TSC	biom:PhysicalFeatureSubClassCode	0..1
10.040	SMT	biom:PhysicalFeatureNCICCode	0..3
10.041	SMS	biom:PhysicalFeatureSize	0..1
"	HGT	biom:PhysicalFeatureHeightMeasure	1..1
"	WID	biom:PhysicalFeatureWidthMeasure	1..1
10.039	T10	biom:PhysicalFeatureReferenceIdentification	0..1
10.044	ITX	biom:ImageTransformationCode	0..18
10.034 ⁴⁴	ICDR	biom:ImageCaptureDateEstimateRange	0..1
10.046 ⁴⁵	SUB	biom:SubjectExistentialDetails	0..1
"	SSC	biom:SubjectExistentialStatusCode	1..1
"	SBSC	biom:SubjectBodyStatusCode	0..1
"	SBCC	biom:SubjectBodyClassCode	0..1
10.047 ⁴⁶	CON	nc:OrganizationUnitName	0..1
10.048 ⁴⁷	PID	biom:PatternedInjuryDetail	0..1
"	PARC	biom:PatternedInjuryADAReferenceCodeList	0..*
"	PADT	biom:PatternedInjuryDescriptiveText	0..1

⁴³ Repeat this element as necessary to represent **TC2, TC3, TC4, TC5** and **TC6**.

⁴⁴ [2013n>] New Field [<2013n]

⁴⁵ [2013n>] New Field [<2013n]

⁴⁶ [2013n>] New Field [<2013n]

⁴⁷ [2013n>] New Field [<2013n]

Field ID	Mnemonic	XML element name	Cardinality
10.049 ⁴⁸	CID	biom:CheilosscopicImageInformation	0..1
"	LPW	biom:LipPrintWidth	0..1
"	LPH	biom:LipPrintHeight	0..1
"	PHW	biom:PhiltrumWidth	0..1
"	PHH	biom:PhiltrumHeight	0..1
"	ULCL	biom:UpperLipCharacterizationCodeList	0..5
"	LLCL	biom:LowerLipCharacterizationCodeList	0..5
"	LCLD	biom:LipContactLineDescriptorCode	0..1
"	LPCT	biom:LipPrintCharacterizationText	0..1
"	LPPL	biom:LipPrintPathologiesPeculiaritiesCodeList	0..13
"	LPPT	biom:LipPrintPathologiesPeculiaritiesText	0..1
"	LPSL	biom:LipPrintSurfaceCodeList	0..3
"	LPST	biom:LipPrintSurfaceText	0..1
"	LPMC	biom:LipPrintMediumCode	0..1
"	LPMT	biom:LipPrintMediumText	0..1
"	FHDT	biom:PersonFacialHairText	0..1
"	LPDT	biom:LipPositionTensionDescriptiveText	0..1
"	LPAT	biom:LipPrintDescriptiveText	0..1
"	LPCT	biom:LipPrintComparisonDescriptiveText	0..1
10.050 ⁴⁹	VID	biom:DentalVisualImageDataInformation	0..1
"	VIVC	biom:DentalVisualImageCode	1..1
"	VIDT	biom:DentalVisualImageDescriptiveText	0..1
"	VICD	biom:DentalVisualImageComparisonDescriptiveText	0..1
10.051 ⁵⁰	RSP	biom:RulerScalePresenceInformation	0..1
"	RSU	biom:RulerScaleUnitCode	0..1

⁴⁸ [2013n>] New Field [<2013n]

⁴⁹ [2013n>] New Field [<2013n]

⁵⁰ [2013n>] New Field [<2013n]

Field ID	Mnemonic	XML element name	Cardinality
“	RSM	biom:RulerScaleMakeText	0..1
“	RSO	biom:RulerScaleModelText	0..1

Type-11

Field ID	Mnemonic	XML element name	Cardinality
“		itl:PackageVoiceDataRecord	0..*
11.001		biom:RecordCategoryCode	1..1
11.002	IDC	biom:ImageReferenceIdentification	1..1
11.100- 11.900	UDF	itl:UserDefinedFields	0..1
11.902	ANN	biom:ProcessAnnotation	0..1
“	GMT	biom:ProcessUTCDate	1..1
“	NAV	biom:ProcessName	1..1
“	OWN	biom:ProcessOwnerText	1..1
“	PRO	biom:ProcessDescriptionText	1..1
11.995	ASC	biom:AssociatedContext	0..255
“	ACN	biom:ContextIdentification	1..1
“	ASP	biom:ImageSegmentIdentification	0..1
11.996	HAS	biom:DigitalAudioRecordHashValue	0..1
11.997 ⁵¹	SOR	biom:SourceRepresentation	0..255
“	SRN	biom:SourceIdentification	1..1
11.999	DATA	nc:BinaryBase64Object	0..1
11.032	SGEO	biom:SegmentGeographicalLocation	0..600000
“	GRT	nc:LocationDescriptionText	0..1
“	-	nc:LocationGeographicElevation	0..1

51 RSP does not appear in Field 11.997 since the concept of image segmentation does not apply to an audio.

Field ID	Mnemonic	XML element name	Cardinality
"	ELE	nc:MeasurePointValue	0..1
"	-	biom:LocationTwoDimensionalGeographicCoordinate	0..1
"	-	nc:GeographicCoordinateLatitude	0..1
"	LTD	nc:LatitudeDegreeValue	0..1
"	LTM	nc:LatitudeMinuteValue	0..1
"	LTS	nc:LatitudeSecondValue	0..1
"	-	nc:GeographicCoordinateLongitude	0..1
"	LGD	nc:LongitudeDegreeValue	0..1
"	LGM	nc:LongitudeMinuteValue	0..1
"	LGS	nc:LongitudeSecondValue	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemCode ³⁵	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemName ³⁶	0..1
"	-	nc:LocationUTMCoordinate	0..1
"	GCE	nc:UTMEastingValue	0..1
"	GCM	nc:UTMGridZoneID	0..1
"	GCN	nc:UTMNorthingValue	0..1
"	-	biom:LocationAlternateGeographicSystemValue	0..1
"	OSI	biom:GeographicLocationSystemName	1..1
"	OCV	biom:GeographicLocationText	1..1
"	UTE	biom:CaptureUTCDateTime	0..1
"	SCT	biom:CellPhoneTowerCodeText	0..1
"	SIL	biom:SegmentIdentifierList	0..600000
11.003	AOD	biom:AudioObjectDescriptorCode	1..1
-	-	biom:SourceAgency	1..1

Field ID	Mnemonic	XML element name	Cardinality
11.004	SRC	nc:OrganizationIdentification	1..1
11.993	SAN	nc:OrganizationName	0..1
11.005	VRSO	biom:RecordingSettingDetail	0..1
"	STC	biom:RecordingSourceCategoryCode	1..1
"	SON	biom:SourceOrganizationName	0..1
"	POC	nc:OrganizationPrimaryContactInformation	0..1
"	CSC	biom:RecordingSourceCountryISO3166Alpha2Code ⁵²	0..1
"	CSC	biom:RecordingSourceCountryISO3166Alpha3Code ⁵³	0..1
"	CSC	biom:RecordingSourceCountryISO3166NumericCode ⁵⁴	0..1
"	CSC	biom:RecordingSourceCountryGENCAAlpha2Code ⁵⁵	0..1
"	CSC	biom:RecordingSourceCountryGENCAAlpha3Code ⁵⁶	0..1
"	CSC	biom:RecordingSourceCountryGENCNumericCode ⁵⁷	0..1
11.006	VRC	biom:RecordingContentDescriptor	0..1
"	AVI	biom:RecordingAssignedVoiceCategoryCode	1..1
"	SPC	biom:SpeakerPluralityCode	0..1
"	COM	biom:RecordingContentComment	0..1
11.007	AREC	biom: AudioSourceRecorder	0..1
"	RDD	biom: CaptureDeviceDescriptionText	0..1
"	MAK	biom: CaptureDeviceMakeText	0..1
"	MOD	biom: CaptureDeviceModelText	0..1
"	SER	biom: CaptureDeviceSerialNumberText	0..1

⁵² Used for 2-character representations of *ISO 3166-1*.

⁵³ Used for 3-character representations of *ISO 3166-1*.

⁵⁴ Used for numeric representations of *ISO 3166-1*.

⁵⁵ Used for 2-character representations of *GENC*.

⁵⁶ Used for 3-character representations of *GENC*.

⁵⁷ Used for numeric representations of *GENC*.

Field ID	Mnemonic	XML element name	Cardinality
11.008	AQS	biom:SourceAcquisition	0..1
"	AQC	biom:AcquisitionSourceCode	1..1
"	A2D	biom:AcquisitionDigitalConversionDescriptionText	0..1
"	FDN	biom:AcquisitionRadioTransmissionFormatDescriptionText	0..1
"	AQSC	biom:AcquisitionSpecialCharacteristicsText	0..1
11.009	RCD	biom:RecordCreationDate	1..1
11.010	VRD	biom:CaptureDate	0..1
11.011	TRD	biom:RecordingDuration	0..1
"	TIM	biom:RecordingDurationTime	0..1
"	CBY	biom:RecordingCompressedBytesQuantity	0..1
"	TSM	biom:RecordingSampleQuantity	0..1
11.012	PMO	biom:PhysicalMediaObject	0..1
"	MTD	biom:MediaCategoryText	1..1
"	RSP	biom:RecordingSpeedRate	0..1
"	RSU	biom:RecordingSpeedUnitText	0..1
"	EQD	biom:AudioEqualizationText	0..1
"	TRC	biom:AudioTrackQuantity	0..1
"	STK	biom:SpeakerTrackList	0..9999
"	COM	biom:MediaCommentText	0..1
11.013	CONT	biom:DigitalMediaContainer	0..1
"	CONC	biom:DigitalMediaContainerFormatCode	0..1
"	ECON	biom:DigitalMediaContainerExternalReferenceCodeText	0..1
"	COM	biom:AudioCommentText	0..1
11.014	CDC	biom:CodecDetails	0..1

Field ID	Mnemonic	XML element name	Cardinality
“	CODC	biom:CodecCategoryCode	0..1
“	SRTN	biom:SamplingRate	0..1
“	BITD	biom:RecordingBitDepthValue	0..1
“	ENDC	biom:RecordingEndianCode	0..1
“	NFMT	biom:NumericFormatText	0..1
“	CHC	biom:RecordingChannelsQuantity	0..1
“	ECOD	biom:CodecExternalReferenceCodeText	0..1
“	COM	biom:CodecCommentText	0..1
11.021	RED	biom:RedactionInformation	0..1
“	RDI	biom:RedactionDiscontinuityIndicatorCode	1..1
“	RDA	biom:ProcessingAuthorityText	0..1
“	COM	biom:ProcessingCommentText	0..1
11.022	RDD	biom:RedactionDiaryInformation	0..600000
“	SID	biom:SegmentIdentifier	1..1
“	TRK	biom:TrackChannelList	0..9999
“	RST	biom:RelativeStartTime	1..1
“	RET	biom:RelativeEndTime	1..1
“	COM	biom:DiaryCommentText	0..1
11.023	DIS	biom:DiscontinuityInformation	0..1
“	DCI	biom:RedactionDiscontinuityIndicatorCode	1..1
“	CTA	biom:ProcessingAuthorityText	0..1
“	COM	biom:ProcessingCommentText	0..1
11.024	DSD	biom:DiscontinuityDiaryInformation	0..600000
“	SID	biom:SegmentIdentifier	1..1

Field ID	Mnemonic	XML element name	Cardinality
"	TRK	biom:TrackChannelList	0..9999
"	RST	biom:RelativeStartTime	1..1
"	RET	biom:RelativeEndTime	1..1
"	COM	biom:DiaryCommentText	0..1
11.025	VOC	biom:VocalContentInformation	0..1
"	DII	biom:DiarizationIndicatorCode	1..1
"	DAU	biom:ProcessingAuthorityText	0..1
"	COM	biom:ProcessingCommentText	0..1
11.026	VCD	biom:VocalContentDiaryInformation	0..600000
"	SID	biom:SegmentIdentifier	1..1
"	TRK	biom:TrackChannelList	0..9999
"	RST	biom:RelativeStartTime	1..1
"	RET	biom:RelativeEndTime	1..1
"	COM	biom:DiaryCommentText	0..1
"	TDT	biom:DiaryTaggedDate	0..1
"	TST	biom:TagStartDateTime	0..1
"	TET	biom:TagEndDateTime	0..1
"	ORD	biom:OriginalRecordingDateTime	0..1
"	SRT	biom:SegmentRecordingStartTime	0..1
"	END	biom:SegmentRecordingEndTime	0..1
"	TMD	biom:TimeSourceDescriptionText	0..1
"	TCOM	biom:TimeCommentText	0..1
11.027	OCON	biom:OtherContentInformation	0..1
"	DII	biom:DiarizationIndicatorCode	1..1

Field ID	Mnemonic	XML element name	Cardinality
“	DAU	biom:ProcessingAuthorityText	0..1
“	COM	biom:ProcessingCommentText	0..1
11.028	OCD	biom:OtherContentDiaryInformation	0..600000
“	SID	biom:SegmentIdentifier	1..1
“	TRK	biom:TrackChannelList	0..9999
“	RST	biom:RelativeStartTime	1..1
“	RET	biom:RelativeEndTime	1..1
“	COM	biom:DiaryCommentText	0..1
“	TDT	biom:DiaryTaggedDate	0..1
“	TST	biom:TagStartDateTime	0..1
“	TET	biom:TagEndDateTime	0..1
“	ORD	biom:OriginalRecordingDateTime	0..1
“	SRT	biom:SegmentRecordingStartTime	0..1
“	END	biom:SegmentRecordingEndTime	0..1
“	TMD	biom:TimeSourceDescriptionText	0..1
“	TCOM	biom:TimeCommentText	0..1
11.033	SQV	biom:VocalSegmentQualityValue	0..9
“	SIL	biom:SegmentIdentifierList	0..600000
“	QVU	biom:QualityValue	1..1
“	QAV	biom:QualityAlgorithmVendorIdentification	1..1
“	QAP	biom:QualityAlgorithmProductIdentification	1..1
“	COM	biom:VocalSegmentQualityCommentText	0..1
11.034	VCI	biom:VocalCollisionIdentifierList	0..600000
11.035	PPY	biom:SegmentProcessingPriorityInformation	0..9

Field ID	Mnemonic	XML element name	Cardinality
“	SIL	biom:SegmentIdentifierList	0..600000
“	PTY	biom:ProcessingPriorityValue	1..1
11.036	VSCT	biom:SegmentContentInformation	0..600000
“	SIL	biom:SegmentIdentifierList	0..600000
“	TRN	biom:SegmentTranscriptText	0..1
“	LNG	biom:SegmentTranscriptLanguageText	0..1
“	PTT	biom:SegmentPhoneticTranscriptText	0..1
“	PTC	biom:PhoneticTranscriptConvention	0..1
“	TLT	biom:SegmentTranslationText	0..1
“	TLG	biom:TranslationLanguageCode	0..1
“	COM	biom:SegmentContentCommentText	0..1
“	TAC	biom:TranscriptAuthorityCommentText	0..1
11.037	SCC	biom:VocalSegmentSpeakerCharacteristicsInformation	0..600000
“	SIL	biom:SegmentIdentifierList	0..600000
“	SPL	biom:SpeakerList	0..9999
“	T2C	biom>Type2CrossReferenceIdentificationList	0..98
“	IMP	biom:ImpairmentValue	0..1
“	DSL	biom:SpokenLanguageCode	0..1
“	LPS	biom:LanguageProficiencyValue	0..1
“	STY	biom:SpeechStyleCode	0..1
“	INT	biom:IntelligibilityValue	0..1
“	FDC	biom:FamiliarityValue	0..1
“	HCM	biom:HealthCommentText	0..1
“	EMC	biom:EmotionalStateCode	0..1

Field ID	Mnemonic	XML element name	Cardinality
"	VES	biom:VocalEffortValue	0..1
"	VSC	biom:VocalStyleCode	0..1
"	RAI	biom:RecordingAwarenessValue	0..1
"	SCR	biom:ScriptText	0..1
"	COM	biom:SpeechCharacteristicsCommentText	0..1
11.038	SCH	biom:SegmentChannelInformation	0..600000
"	SIL	biom:SegmentIdentifier	0..600000
"	ACD	biom:AudioCaptureDeviceCode	0..1
"	MTC	biom:TransducerPrincipleCode	0..1
"	ENV	biom:AudioCaptureEnvironmentText	0..1
"	DST	biom:TransducerDistanceValue	0..1
"	AQC	biom:AcquisitionSourceCode	0..1
"	VMT	biom:TransductionAlterationDescriptionText	0..1
"	COM	biom:ChannelCommentText	0..1
11.051	COM	biom:AudioCommentText	0..1
11.994	EFR	biom:SourceExternalFileReferenceText	0..1
-		biom:SourceAudio ⁵⁸	0..1
-		biom:SourceVideo ⁵⁹	0..1

Type-12

Field ID	Mnemonic	XML element name	Cardinality
		itl:PackageForensicDentalDataRecord	0..*
12.001	-	biom:RecordCategoryCode	1..1

58 Use this element if the source is an audio file.

59 Use this element if the source is a video file.

Field ID	Mnemonic	XML element name	Cardinality
12.002	IDC	biom:ImageReferenceIdentification	1..1
12.992	T2C	biom:Type2CrossReferenceIdentification	0..1
12.990	T10C	biom:Type10CrossReferenceIdentification	0..99
12.991	T22C	biom:Type22CrossReferenceIdentification	0..99
12.200- 12.900	USR	itl:UserDefinedFields	0..*
12.902	ANN	biom:ProcessAnnotation	0..*
"	GMT	biom:ProcessUTCDate	1..1
"	NAV	biom:ProcessName	1..1
"	OWN	biom:ProcessOwnerText	1..1
"	PRO	biom:ProcessDescriptionText	1..1
12.995	ASC	biom:AssociatedContext	0..255
"	ACN	biom:ContextIdentification	1..1
"	ASP	biom:ImageSegmentIdentification	0..1
12.996	HAS	biom:ImageHashValue	0..1
12.999	DATA	nc:BinaryBase64Object	0..1
-	-	biom:DentalCaptureDetail	1..1
12.998	GEO	biom:CaptureLocation	0..1
"	GRT	nc:LocationDescriptionText	0..*
"	-	nc:LocationGeographicElevation	0..1
"	ELE	nc:MeasurePointValue	1..1
"	-	biom:LocationTwoDimensionalGeographicCoordinate	0..1
"	-	nc:GeographicCoordinateLatitude	1..1
"	LTD	nc:LatitudeDegreeValue	0..1
"	LTM	nc:LatitudeMinuteValue	0..1

Field ID	Mnemonic	XML element name	Cardinality
"	LTS	nc:LatitudeSecondValue	1..1
"	-	nc:GeographicCoordinateLongitude	1..1
"	LGD	nc:LongitudeDegreeValue	0..1
"	LGM	nc:LongitudeMinuteValue	0..1
"	LGS	nc:LongitudeSecondValue	0..*
"	GDC	biom:GeodeticDatumCoordinateSystemCode ³⁵	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemName ³⁶	0..1
"	-	nc:LocationUTMCoordinate	0..1
"	GCE	nc:UTMEastingValue	1..1
"	GCM	nc:UTMGridZoneID	1..1
"	GCN	nc:UTMNorthingValue	1..1
"	-	biom:LocationAlternateGeographicSystemValue	0..1
"	OSI	biom:GeographicLocationSystemName	1..1
"	OCV	biom:GeographicLocationText	1..1
"	UTE	biom:CaptureUTCDateTime	0..1
12.047	CON	biom:CaptureOrganization	0..1
-	-	biom:SourceAgency	1..1
12.004	SRC	nc:OrganizationIdentification	1..1
12.993	SAN	nc:OrganizationName	0..1
12.994	EFR	biom:SourceExternalFileReferenceText	0..1

Field ID	Mnemonic	XML element name	Cardinality
-		biom:SourceImage ⁶⁰	0..1 ⁶¹
12.003	FDS	biom:ForensicDentalSetting	0..1
"	FACC	biom:ForensicAnalystCategoryCode	1..1
"	FOPC	nc:OrganizationPrimaryContactInformation	0..1
		nc>ContactInformationDescriptionText	0..1
"	FSCC	biom:ForensicSourceCountryISO3166Alpha2Code ⁶²	0..1
"	FSCC	biom:ForensicSourceCountryISO3166Alpha3Code ⁶³	0..1
"	FSCC	biom:ForensicSourceCountryISO3166NumericCode ⁶⁴	0..1
"	FSCC	biom:ForensicSourceCountryGENCAAlpha2Code ⁶⁵	0..1
"	FSCC	biom:ForensicSourceCountryGENCAAlpha3Code ⁶⁶	0..1
"	FSCC	biom:ForensicSourceCountryGENCNumericCode ⁶⁷	0..1
12.006	DSI	biom:DentalSubjectInformation	1..1
"	DSC	biom:SubjectStatusCode	1..1
"	DLCD	biom:SubjectLastContactDate	0..1
"	DRLC	biom:SubjectLastContactDateEstimateRange	0..1
"	DPBD	nc:PersonBirthDate	0..1
"	DRBD	biom:SubjectBirthDateEstimateRange	0..1
"	DPET	nc:PersonEthnicityText	0..1
"	DRAC	biom:SubjectDNARecordsAvailableCode	0..1
"	DCLD	biom:SubjectCollectionLocationDescriptionText	0..1

60 Use this element if the source is a still image.

61 One and only one of biom:SourceImage, biom:SourceAudio or biom:SourceVideo must appear.

62 Used for 2-character representations of *ISO 3166-1*.

63 Used for 3-character representations of *ISO 3166-1*.

64 Used for numeric representations of *ISO 3166-1*.

65 Used for 2-character representations of *GENC*.

66 Used for 3-character representations of *GENC*.

67 Used for numeric representations of *GENC*.

Field ID	Mnemonic	XML element name	Cardinality
“	DEDD	biom:SubjectEstimatedDeathDate	0..1
“	DRDE	biom:SubjectDateRange	0..1
“	DTER	biom:SubjectDeathTimeEstimateRationaleText	0..1
“	DEAT	biom:SubjectDeathAgeEstimateText	0..1
12.007	ODES	biom:OriginalDentalEncodingSystemInformation	0..1
“	OSNC	biom:SystemNameCode	1..1
“	OSVT	biom:SystemVersionText	0..1
“	OTPC	biom:ToothPermanenceCategoryCode	1..1
“	ORDG	biom:RestorationDataGranularityCode	1..1
“	OMPN	biom:MorphologyPositionalNumberingCode	0..1
12.008	TDES	biom:TransmittalDentalEncodingSystemInformation	0..1
“	TSNC	biom:SystemNameCode	1..1
“	TSVT	biom:SystemVersionText	0..1
“	TTPC	biom:ToothPermanenceCategoryCode	1..1
“	TRDG	biom:RestorationDataGranularityCode	1..1
“	TMPN	biom:MorphologyPositionalNumberingCode	0..1
12.009	HDD	biom:DentalHistoryDataDetail	0..*
“	HARC	biom:DentalHistoryADAReferenceCode	1..1
“	HADT	biom:DentalHistoryAdditionalDescriptiveText	0..1
12.010	TDD	biom:ToothDataDetail	0..*
“	TDR	biom:ToothDataRecordingDate ⁶⁸	0..1
“	TDRR	biom:ToothDataRecordingDateEstimateRange	0..1
“	TID	biom:ToothID	1..1
“	TOET	biom:OriginalSystemEncodingText	0..1

68 It is optional. However, it shall not appear in a subfield if TDR is not present in that instance of the subfield.

Field ID	Mnemonic	XML element name	Cardinality
"	TARC	biom:ToothDataADAResourceCodeList	1..1
"	TTET	biom:TransmittedToothEncodingText	0..1
"	TICC	biom:ToothIDCertaintyCode	0..1
"	TADT	biom:ToothDataAdditionalDescriptiveText	0..1
12.011	MDD	biom:MouthDataDetail	0..*
"	MDR	biom:MouthDataRecordingDate	0..1
"	MDRR	biom:MouthDataRecordingDateEstimateRange	0..1
"	MARC	biom:MouthDataADAResourceCodeList	1..1
"	MADT	biom:MouthDataAdditionalDescriptiveText	0..1
12.012	DSTI	biom:DentalStudyToothImprintDetail	0..*
"	SDR	biom:DentalStudyRecordingDate	0..1
"	SDRR	biom:DentalStudyRecordingDateEstimateRange	0..1
"	SRC	biom:DentalStudyReferenceCode	1..1
"	SADT	biom:DentalStudyAdditionalDescriptiveText	1..1
12.020	COM	biom:ForensicDentalCommentText	0..1
12.047	CON	biom:CaptureOrganization	0..1

Type-13

Field ID	Mnemonic	XML element name	Cardinality
		itl:PackageLatentImageRecord	0..*
13.001	-	biom:RecordCategoryCode	1..1
13.002	IDC	biom:ImageReferenceIdentification	1..1
13.200- 13.900	UDF	itl:UserDefinedFields ⁶⁹	0..*
13.902	ANN	biom:ProcessAnnotation	0..*
"	GMT	biom:ProcessUTCDate	1..1
"	NAV	biom:ProcessName	1..1
"	OWN	biom:ProcessOwnerText	1..1

69 This element is abstract and must be substituted with a user-defined element.

Field ID	Mnemonic	XML element name	Cardinality
"	PRO	biom:ProcessDescriptionText	1..1
13.995	ASC	biom:AssociatedContext	0..255
"	ACN	biom:ContextIdentification	1..1
"	ASP	biom:ImageSegmentIdentification	0..1
13.996	HAS	biom:ImageHashValue	0..1
13.997	SOR	biom:SourceRepresentation	0..255
"	SRN	biom:SourceIdentification	1..1
"	RSP	biom:ImageSegmentIdentification	0..1
-	-	biom:FingerImpressionImage ⁷⁰	0..1 ⁷¹
-	-	biom:PalmprintImage ⁷²	0..1 ⁷¹
-	-	biom:PlantarImage ⁷³	0..1 ⁷¹
-	-	biom:FrictionRidgeImage ⁷⁴	0..1 ⁷¹
13.999	DATA	nc:BinaryBase64Object	1..1
13.012	BPX	biom:ImageBitsPerPixelQuantity	1..1
-		biom:ImageCaptureDetail	1..1
13.998	GEO	biom:CaptureLocation	0..1
"	GRT	nc:LocationDescriptionText	0..*
"	-	nc:LocationGeographicElevation	0..1
"	ELE	nc:MeasurePointValue	1..1
"	-	biom:LocationTwoDimensionalGeographicCoordinate	0..1
"	-	nc:GeographicCoordinateLatitude	1..1
"	LTD	nc:LatitudeDegreeValue	1..1
"	LTM	nc:LatitudeMinuteValue	0..1
"	LTS	nc:LatitudeSecondValue	0..1
"	-	nc:GeographicCoordinateLongitude	1..1
"	LGD	nc:LongitudeDegreeValue	1..1
"	LGM	nc:LongitudeMinuteValue	0..1
"	LGS	nc:LongitudeSecondValue	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemCode ³⁵	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemName ³⁶	0..1

70 This element may be used if the **IMP** field contains one of the values 4 through 7, 28 or 29.

71 Only one of these elements may appear.

72 This element may be used if the **IMP** field contains one of the values 12 through 15, 28 or 29.

73 This element may be used if the **IMP** field contains one of the values 32 through 35, 28 or 29.

74 This element may be used for any friction ridge image. Codes 36 through 39 shall be specified using this element.

Field ID	Mnemonic	XML element name	Cardinality
"	-	nc:LocationUTMCoordinate	0..1
"	GCE	nc:UTMEastingValue	1..1
"	GCM	nc:UTMGridZoneID	1..1
"	GCN	nc:UTMNorthingValue	1..1
"	-	biom:LocationAlternateGeographicSystemValue	0..1
"	OSI	biom:GeographicLocationSystemName	1..1
"	OCV	biom:GeographicLocationText	1..1
"	UTE	biom:CaptureUTCDateTime	0..1
13.005	LCD	biom:CaptureDate	1..1
13.903	DUI	biom:CaptureDeviceIdentification	0..1
13.904	MMS	-	
"	MAK	biom:CaptureDeviceMakeText	0..1
"	MOD	biom:CaptureDeviceModelText	0..1
"	SER	biom:CaptureDeviceSerialNumberText	0..1
13.016	SHPS	biom:CaptureHorizontalPixelDensityValue	0..1
-	-	biom:CaptureOrganization	1..1
13.004	SRC	nc:OrganizationIdentification	1..1
13.993	SAN	nc:OrganizationName	0..1
13.017	SVPS	biom:CaptureVerticalPixelDensityValue	0..1
13.020	COM	biom:ImageCommentText	0..1
13.011	CGA	biom:ImageCompressionAlgorithmText	1..1
13.006	HLL	biom:ImageHorizontalLineLengthPixelQuantity	1..1
13.009	THPS	biom:ImageHorizontalPixelDensityValue	1..1
13.008	SLC	biom:ImageScaleUnitsCode	1..1
13.007	VLL	biom:ImageVerticalLineLengthPixelQuantity	1..1
13.010	TVPS	biom:ImageVerticalPixelDensityValue	1..1
13.003	IMP	biom:FingerprintImageImpressionCaptureCategoryCode	1..1
13.013	FGP	biom:FingerPositionCode ⁷⁰	1..6
"	FGP	biom:PalmPositionCode ⁷²	1..6
"	FGP	biom:PlantarPositionCode ⁷³	1..6
"	FGP	biom:FrictionRidgePositionCode ⁷⁴	1..6
-	-	biom:FingerprintImageMajorCasePrint	0..1
13.014 ⁷⁵	SPD	-	
"	PDF	biom:FingerPositionCode	0..9

75 This is a structural anomaly, where there is no element to represent the **Field 13.014: Search position descriptors / SPD** repeating subfield, and instead each information item repeats. This anomaly is retained for backward compatibility purposes.

Field ID	Mnemonic	XML element name	Cardinality
"	FIC	biom:MajorCasePrintCode	0..9
13.015	PPC	biom:MajorCasePrintSegmentOffset	0..12
"	BVC	biom:SegmentBottomVerticalCoordinateValue	1..1
"	LOS	biom:SegmentLocationCode	1..1
"	FVC	biom:SegmentFingerViewCode	1..1
"	LHC	biom:SegmentLeftHorizontalCoordinateValue	1..1
"	RHC	biom:SegmentRightHorizontalCoordinateValue	1..1
"	TVC	biom:SegmentTopVerticalCoordinateValue	1..1
13.024	LQM	biom:FingerprintImageQuality ⁷⁰	0..9
13.024	LQM	biom:PalmprintImageQuality ⁷²	0..9
13.024	LQM	biom:PlantarImageQuality ⁷³	0..9
13.024	LQM	biom:FrictionRidgeImageQuality ⁷⁴	0..9
"	FRMP	biom:FingerPositionCode ⁷⁰	1..1
"	FRMP	biom:PalmPositionCode ⁷²	1..1
"	FRMP	biom:PlantarPositionCode ⁷³	1..1
"	FRMP	biom:FrictionRidgePositionCode ⁷⁴	1..1
"	QAP	biom:QualityAlgorithmProductIdentification	1..1
"	QAV	biom:QualityAlgorithmVendorIdentification	1..1
"	QVU	biom:QualityValue	1..1
13.018 ⁷⁶	RSP	biom:RulerScalePresenceInformation	0..1
"	RSU	biom:RulerScaleUnitCode	0..1
"	RSM	biom:RulerScaleMakeText	0..1
"	RSO	biom:RulerScaleModelText	0..1
"	RSF	biom:StandardFingerprintFormNumber	0..1
13.019 ⁷⁷	REM	biom:ResolutionMethodInformation	0..1
"	MDR	biom:ResolutionMeansCode	0..1
"	KSL	biom:ResolutionScaleLength	0..1
"	KSU	biom:ResolutionScaleUnitCode	0..1
"	SXA	biom:ResolutionScaleXCoordinateA	0..1
"	SYA	biom:ResolutionScaleYCoordinateA	0..1
"	SXB	biom:ResolutionScaleXCoordinateB	0..1

⁷⁶[2013n>] New Field [<2013n]

⁷⁷[2013n>] New Field [<2013n]

Field ID	Mnemonic	XML element name	Cardinality
"	SYB	biom:ResolutionScaleYCoordinateB	0..1
"	COM	biom:ResolutionCommentText	0..1
13.046 ⁷⁸	SUB	biom:SubjectExistentialDetails	0..1
"	SSC	biom:SubjectExistentialStatusCode	1..1
"	SBSC	biom:SubjectBodyStatusCode	0..1
"	SBCC	biom:SubjectBodyClassCode	0..1
13.047 ⁷⁹	CON	nc:OrganizationUnitName	0..1

Type-14

Field ID	Mnemonic	XML element name	Cardinality
		itl:PackageFingerprintImageRecord	0..*
14.001	-	biom:RecordCategoryCode	1..1
14.002	IDC	biom:ImageReferenceIdentification	1..1
14.200- 14.900	UDF	itl:UserDefinedFields ⁸⁰	0..*
14.902	ANN	biom:ProcessAnnotation	0..*
"	GMT	biom:ProcessUTCDate	1..1
"	NAV	biom:ProcessName	1..1
"	OWN	biom:ProcessOwnerText	1..1
"	PRO	biom:ProcessDescriptionText	1..1
14.995	ASC	biom:AssociatedContext	0..255
"	ACN	biom:ContextIdentification	1..1
"	ASP	biom:ImageSegmentIdentification	0..1
14.996	HAS	biom:ImageHashValue	0..1
14.997	SOR	biom:SourceRepresentation	0..255
"	SRN	biom:SourceIdentification	1..1
"	RSP	biom:ImageSegmentIdentification	0..1
-	-	biom:FingerImpressionImage	1..1
14.999	DATA	nc:BinaryBase64Object	0..1
14.012	BPX	biom:ImageBitsPerPixelQuantity	0..1
-	-	biom:ImageCaptureDetail	1..1
14.998	GEO	biom:CaptureLocation	0..1

⁷⁸[2013n>] New Field [<2013n]

⁷⁹[2013n>] New Field [<2013n]

80 This element is abstract and must be substituted with a user-defined element.

Field ID	Mnemonic	XML element name	Cardinality
"	GRT	nc:LocationDescriptionText	0..*
"	-	nc:LocationGeographicElevation	0..1
"	ELE	nc:MeasurePointValue	1..1
"	-	biom:LocationTwoDimensionalGeographicCoordinate	0..1
"	-	nc:GeographicCoordinateLatitude	1..1
"	LTD	nc:LatitudeDegreeValue	1..1
"	LTM	nc:LatitudeMinuteValue	0..1
"	LTS	nc:LatitudeSecondValue	0..1
"	-	nc:GeographicCoordinateLongitude	1..1
"	LGD	nc:LongitudeDegreeValue	1..1
"	LGM	nc:LongitudeMinuteValue	0..1
"	LGS	nc:LongitudeSecondValue	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemCode ³⁵	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemName ³⁶	0..1
"	-	nc:LocationUTMCoordinate	0..1
"	GCE	nc:UTMEastingValue	1..1
"		nc:UTMGridZoneID	1..1
"	GCN	nc:UTMNorthingValue	1..1
"	-	biom:LocationAlternateGeographicSystemValue	0..1
"	OSI	biom:GeographicLocationSystemName	1..1
"	OCV	biom:GeographicLocationText	1..1
"	UTE	biom:CaptureUTCDateTime	0..1
14.005	FCD	biom:CaptureDate	1..1
14.903	DUI	biom:CaptureDeviceIdentification	0..1
14.904	MMS	-	
"	MAK	biom:CaptureDeviceMakeText	0..1
"	MOD	biom:CaptureDeviceModelText	0..1
"	SER	biom:CaptureDeviceSerialNumberText	0..1
14.016	SHPS	biom:CaptureHorizontalPixelDensityValue	0..1
-	-	biom:CaptureOrganization	1..1
14.004	SRC	nc:OrganizationIdentification	1..1
14.993	SAN	nc:OrganizationName	0..1
14.017	SVPS	biom:CaptureVerticalPixelDensityValue	0..1

Field ID	Mnemonic	XML element name	Cardinality
14.030	DMM	biom:CaptureDeviceMonitoringModeCode	0..1
14.026	SCF	biom:CaptureIdentification	0..1
14.020	COM	biom:ImageCommentText	0..1
14.011	CGA	biom:ImageCompressionAlgorithmText	0..1
14.006	HLL	biom:ImageHorizontalLineLengthPixelQuantity	0..1
14.009	THPS	biom:ImageHorizontalPixelDensityValue	0..1
14.008	SLC	biom:ImageScaleUnitsCode	0..1
14.007	VLL	biom:ImageVerticalLineLengthPixelQuantity	0..1
14.010	TVPS	biom:ImageVerticalPixelDensityValue	0..1
14.003	IMP	biom:FingerprintImageImpressionCaptureCategoryCode	1..1
14.013	FGP	biom:FingerPositionCode	1..1
-	-	biom:FingerprintImageMajorCasePrint	0..1
14.014	PPD	-	
"	DFP	biom:FingerPositionCode	0..1
"	FIC	biom:MajorCasePrintCode	0..1
14.015	PPC	biom:MajorCasePrintSegmentOffset	0..12
"	BVC	biom:SegmentBottomVerticalCoordinateValue	1..1
"	LOS	biom:SegmentLocationCode	1..1
"	FVC	biom:SegmentFingerViewCode	1..1
"	LHC	biom:SegmentLeftHorizontalCoordinateValue	1..1
"	RHC	biom:SegmentRightHorizontalCoordinateValue	1..1
"	TVC	biom:SegmentTopVerticalCoordinateValue	1..1
14.018	AMP	biom:FingerprintImageFingerMissing	0..5
"	FRAP	biom:FingerPositionCode	1..1
"	ABC	biom:FingerMissingCode	1..1
14.021	SEG	biom:FingerprintImageSegmentPositionSquare	0..5
"	FRSP	biom:FingerPositionCode	1..1
"	BVC	biom:SegmentBottomVerticalCoordinateValue	1..1
"	LHC	biom:SegmentLeftHorizontalCoordinateValue	1..1
"	RHC	biom:SegmentRightHorizontalCoordinateValue	1..1
"	TVC	biom:SegmentTopVerticalCoordinateValue	1..1
14.022	NQM	biom:FingerprintImageNISTQuality	0..5
"	FRNP	biom:FingerPositionCode	1..1
"	IQS	biom:NISTQualityMeasure	1..1
14.023	SQM	biom:FingerprintImageSegmentationQuality	0..5
"	FRQP	biom:FingerPositionCode	1..1
"	QAP	biom:QualityAlgorithmProductIdentification	1..1

Field ID	Mnemonic	XML element name	Cardinality
"	QAV	biom:QualityAlgorithmVendorIdentification	1..1
"	QVU	biom:QualityValue	1..1
14.024	FQM	biom:FingerprintImageQuality	0..5
"	FRMP	biom:FingerPositionCode	1..1
"	QAP	biom:QualityAlgorithmProductIdentification	1..1
"	QAV	biom:QualityAlgorithmVendorIdentification	1..1
"	QVU	biom:QualityValue	1..1
14.025	ASEG	biom:FingerprintImageSegmentPositionPolygon	0..5
"	FRAS	biom:FingerPositionCode	1..1
"	NOP	biom:PositionPolygonVertexQuantity	1..1
"	-	biom:PositionPolygonVertex	3..99
"	HPO	biom:PositionHorizontalCoordinateValue	1..1
"	VPO	biom:PositionVerticalCoordinateValue	1..1
14.031	FAP	biom:FingerprintImageAcquisitionProfileCode	0..1
14.027	SIF	biom:FingerprintImageStitchedIndicator	0..1
14.046 ⁸¹	SUB	biom:SubjectExistentialDetails	0..1
"	SSC	biom:SubjectExistentialStatusCode	1..1
"	SBSC	biom:SubjectBodyStatusCode	0..1
"	SBCC	biom:SubjectBodyClassCode	0..1
14.047 ⁸²	CON	nc:OrganizationUnitName	0..

Type-15

Field ID	Mnemonic	XML element name	Cardinality
		itl:PackagePalmprintImageRecord	0..*
15.001	-	biom:RecordCategoryCode	1..1
15.002	IDC	biom:ImageReferenceIdentification	1..1
15.200-15.900	UDF	itl:UserDefinedFields ⁸³	0..*
15.902	ANN	biom:ProcessAnnotation	0..*
"	GMT	biom:ProcessUTCDate	1..1
"	NAV	biom:ProcessName	1..1
"	OWN	biom:ProcessOwnerText	1..1

⁸¹[2013n>] New Field [<2013n]

⁸²[2013n>] New Field [<2013n]

83 This element is abstract and must be substituted with a user-defined element.

Field ID	Mnemonic	XML element name	Cardinality
"	PRO	biom:ProcessDescriptionText	1..1
15.995	ASC	biom:AssociatedContext	0..255
"	ACN	biom:ContextIdentification	1..1
"	ASP	biom:ImageSegmentIdentification	0..1
15.996	HAS	biom:ImageHashValue	0..1
15.997	SOR	biom:SourceRepresentation	0..255
"	SRN	biom:SourceIdentification	1..1
"	RSP	biom:ImageSegmentIdentification	0..1
-	-	biom:PalmpintImage	1..1
15.999	DATA	nc:BinaryBase64Object	0..1
15.012	BPX	biom:ImageBitsPerPixelQuantity	0..1
-	-	biom:ImageCaptureDetail	1..1
15.998	GEO	biom:CaptureLocation	0..1
"	GRT	nc:LocationDescriptionText	0..*
"	-	nc:LocationGeographicElevation	0..1
"	ELE	nc:MeasurePointValue	1..1
"	-	biom:LocationTwoDimensionalGeographicCoordinate	0..1
"	-	nc:GeographicCoordinateLatitude	1..1
"	LTD	nc:LatitudeDegreeValue	1..1
"	LTM	nc:LatitudeMinuteValue	0..1
"	LTS	nc:LatitudeSecondValue	0..1
"	-	nc:GeographicCoordinateLongitude	1..1
"	LGD	nc:LongitudeDegreeValue	1..1
"	LGM	nc:LongitudeMinuteValue	0..1
"	LGS	nc:LongitudeSecondValue	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemCode ³⁵	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemName ³⁶	0..1
"	-	nc:LocationUTMCoordinate	0..1
"	GCE	nc:UTMEastingValue	1..1
"	GCM	nc:UTMGridZoneID	1..1
"	GCN	nc:UTMNorthingValue	1..1
"	-	biom:LocationAlternateGeographicSystemValue	0..1
"	OSI	biom:GeographicLocationSystemName	1..1

Field ID	Mnemonic	XML element name	Cardinality
"	OCV	biom:GeographicLocationText	1..1
"	UTE	biom:CaptureUTCDDateTime	0..1
15.005	PCD	biom:CaptureDate	1..1
15.903	DUI	biom:CaptureDeviceIdentification	0..1
15.904	MMS	-	
"	MAK	biom:CaptureDeviceMakeText	0..1
"	MOD	biom:CaptureDeviceModelText	0..1
"	SER	biom:CaptureDeviceSerialNumberText	0..1
15.016	SHPS	biom:CaptureHorizontalPixelDensityValue	0..1
-	-	biom:CaptureOrganization	1..1
15.004	SRC	nc:OrganizationIdentification	1..1
15.993	SAN	nc:OrganizationName	0..1
15.017	SVPS	biom:CaptureVerticalPixelDensityValue	0..1
15.030	DMM	biom:CaptureDeviceMonitoringModeCode	0..1
15.020	COM	biom:ImageCommentText	0..1
15.011	CGA	biom:ImageCompressionAlgorithmText	0..1
15.006	HLL	biom:ImageHorizontalLineLengthPixelQuantity	0..1
15.009	THPS	biom:ImageHorizontalPixelDensityValue	0..1
15.008	SLC	biom:ImageScaleUnitsCode	0..1
15.007	VLL	biom:ImageVerticalLineLengthPixelQuantity	0..1
15.010	TVPS	biom:ImageVerticalPixelDensityValue	0..1
15.003	IMP	biom:FingerprintImageImpressionCaptureCategoryCode	1..1
15.013	FGP	biom:PalmPositionCode	1..1
15.018	AMP	biom:PalmprintImageMissingArea	0..9
"	FRAP	biom:PalmPositionCode	1..1
"	ABC	biom:PalmMissingAreaReasonCode	1..1
15.024	PQM	biom:PalmprintImageQuality	0..9
"	FRMP	biom:PalmPositionCode	1..1
"	QAP	biom:QualityAlgorithmProductIdentification	1..1
"	QVU	biom:QualityValue	1..1
"	QAV	biom:QualityAlgorithmVendorIdentification	1..1
15.021 ⁸⁴	SEG	biom:FingerprintImageSegmentPositionSquare	0..17
"	FRSP	biom:FingerPositionCode	1..1
"	BVC	biom:SegmentBottomVerticalCoordinateValue	1..1
"	LHC	biom:SegmentLeftHorizontalCoordinateValue	1..1

Field ID	Mnemonic	XML element name	Cardinality
"	RHC	biom:SegmentRightHorizontalCoordinateValue	1..1
"	TVC	biom:SegmentTopVerticalCoordinateValue	1..1
15.046 ⁸⁵	SUB	biom:SubjectExistentialDetails	0..1
"	SSC	biom:SubjectExistentialStatusCode	1..1
"	SBSC	biom:SubjectBodyStatusCode	0..1
"	SBCC	biom:SubjectBodyClassCode	0..1
15.047 ⁸⁶	CON	nc:OrganizationUnitName	0..1

Type-16

Field ID	Mnemonic	XML element name	Cardinality
		itl:PackageUserDefinedTestingImageRecord	0..*
16.001	-	biom:RecordCategoryCode	1..1
16.002	IDC	biom:ImageReferenceIdentification	1..1
16.200- 16.900	UDF	itl:UserDefinedFields ⁸⁷	0..*
16.902	ANN	biom:ProcessAnnotation	0..*
"	GMT	biom:ProcessUTCDate	1..1
"	NAV	biom:ProcessName	1..1
"	OWN	biom:ProcessOwnerText	1..1
"	PRO	biom:ProcessDescriptionText	1..1
16.995	ASC	biom:AssociatedContext	0..255
"	ACN	biom:ContextIdentification	1..1
"	ASP	biom:ImageSegmentIdentification	0..1
16.996	HAS	biom:ImageHashValue	0..1
16.997	SOR	biom:SourceRepresentation	0..255
"	SRN	biom:SourceIdentification	1..1
"	RSP	biom:ImageSegmentIdentification	0..1
-	-	biom:TestImage	1..1
16.999	DATA	nc:BinaryBase64Object	1..1
16.003	UDI	nc:BinaryDescriptionText	1..1
16.012	BPX	biom:ImageBitsPerPixelQuantity	1..1

⁸⁵[2013n>] New Field [<2013n]

⁸⁶[2013n>] New Field [<2013n]

87 This element is abstract and must be substituted with a user-defined element.

Field ID	Mnemonic	XML element name	Cardinality
-	-	biom:ImageCaptureDetail	1..1
16.998	GEO	biom:CaptureLocation	0..1
"	GRT	nc:LocationDescriptionText	0..*
"	-	nc:LocationGeographicElevation	0..1
"	ELE	nc:MeasurePointValue	1..1
"	-	biom:LocationTwoDimensionalGeographicCoordinate	0..1
"	-	nc:GeographicCoordinateLatitude	1..1
"	LTD	nc:LatitudeDegreeValue	1..1
"	LTM	nc:LatitudeMinuteValue	0..1
"	LTS	nc:LatitudeSecondValue	0..1
"	-	nc:GeographicCoordinateLongitude	1..1
"	LGD	nc:LongitudeDegreeValue	1..1
"	LGM	nc:LongitudeMinuteValue	0..1
"	LGS	nc:LongitudeSecondValue	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemCode ³⁵	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemName ³⁶	0..1
"	-	nc:LocationUTMCoordinate	0..1
"	GCE	nc:UTMEastingValue	1..1
"	GCM	nc:UTMGridZoneID	1..1
"	GCN	nc:UTMNorthingValue	1..1
"	-	biom:LocationAlternateGeographicSystemValue	0..1
"	OSI	biom:GeographicLocationSystemName	1..1
"	OCV	biom:GeographicLocationText	1..1
"	UTE	biom:CaptureUTCDate	0..1
16.005	UTD	biom:CaptureDate	1..1
16.903	DUI	biom:CaptureDeviceIdentification	0..1
16.904	MMS	-	
"	MAK	biom:CaptureDeviceMakeText	0..1
"	MOD	biom:CaptureDeviceModelText	0..1
"	SER	biom:CaptureDeviceSerialNumberText	0..1
16.016	SHPS	biom:CaptureHorizontalPixelDensityValue	0..1
-	-	biom:CaptureOrganization	1..1
16.004	SRC	nc:OrganizationIdentification	1..1

Field ID	Mnemonic	XML element name	Cardinality
16.993	SAN	nc:OrganizationName	0..1
16.017	SVPS	biom:CaptureVerticalPixelDensityValue	0..1
16.030	DMM	biom:CaptureDeviceMonitoringModeCode	0..1
16.013	CSP	biom:ImageColorSpaceCode	0..1
16.020	COM	biom:ImageCommentText	0..1
16.011	CGA	biom:ImageCompressionAlgorithmText	1..1
16.006	HLL	biom:ImageHorizontalLineLengthPixelQuantity	1..1
16.009	THPS	biom:ImageHorizontalPixelDensityValue	1..1
16.024	UQS	biom:ImageQuality	0..9
"	QAP	biom:QualityAlgorithmProductIdentification	1..1
"	QVU	biom:QualityValue	1..1
"	QAV	biom:QualityAlgorithmVendorIdentification	1..1
16.008	SLC	biom:ImageScaleUnitsCode	1..1
16.007	VLL	biom:ImageVerticalLineLengthPixelQuantity	1..1
16.010	TVPS	biom:ImageVerticalPixelDensityValue	1..1

Type-17

Field ID	Mnemonic	XML element name	Cardinality
		itl:PackageIrisImageRecord	0..*
17.001	-	biom:RecordCategoryCode	1..1
17.002	IDC	biom:ImageReferenceIdentification	1..1
17.200- 17.900	UDF	itl:UserDefinedFields ⁸⁸	0..*
17.902	ANN	biom:ProcessAnnotation	0..*
"	GMT	biom:ProcessUTCDate	1..1
"	NAV	biom:ProcessName	1..1
"	OWN	biom:ProcessOwnerText	1..1
"	PRO	biom:ProcessDescriptionText	1..1
17.995	ASC	biom:AssociatedContext	0..255
"	ACN	biom:ContextIdentification	1..1
"	ASP	biom:ImageSegmentIdentification	0..1
17.996	HAS	biom:ImageHashValue	0..1
17.997	SOR	biom:SourceRepresentation	0..255
"	SRN	biom:SourceIdentification	1..1
"	RSP	biom:ImageSegmentIdentification	0..1
-	-	biom:IrisImage	1..1

88 This element is abstract and must be substituted with a user-defined element.

Field ID	Mnemonic	XML element name	Cardinality
17.999	DATA	nc:BinaryBase64Object	0..1
17.012	BPX	biom:ImageBitsPerPixelQuantity	0..1
-	-	biom:ImageCaptureDetail	1..1
17.998	GEO	biom:CaptureLocation	0..1
"	GRT	nc:LocationDescriptionText	0..*
"	-	nc:LocationGeographicElevation	0..1
"	ELE	nc:MeasurePointValue	1..1
"	-	biom:LocationTwoDimensionalGeographicCoordinate	0..1
"	-	nc:GeographicCoordinateLatitude	1..1
"	LTD	nc:LatitudeDegreeValue	1..1
"	LTM	nc:LatitudeMinuteValue	0..1
"	LTS	nc:LatitudeSecondValue	0..1
"	-	nc:GeographicCoordinateLongitude	1..1
"	LGD	nc:LongitudeDegreeValue	1..1
"	LGM	nc:LongitudeMinuteValue	0..1
"	LGS	nc:LongitudeSecondValue	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemCode ³⁵	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemName ³⁶	0..1
"	-	nc:LocationUTMCoordinate	0..1
"	GCE	nc:UTMEastingValue	1..1
"	GCM	nc:UTMGridZoneID	1..1
"	GCN	nc:UTMNorthingValue	1..1
"	-	biom:LocationAlternateGeographicSystemValue	0..1
"	OSI	biom:GeographicLocationSystemName	1..1
"	OCV	biom:GeographicLocationText	1..1
"	UTE	biom:CaptureUTCDateTime	0..1
17.005	ICD	biom:CaptureDate	1..1
17.017	DUI	biom:CaptureDeviceIdentification	0..1
17.019	MMS	-	
"	MAK	biom:CaptureDeviceMakeText	0..1
"	MOD	biom:CaptureDeviceModelText	0..1
"	SER	biom:CaptureDeviceSerialNumberText	0..1
17.022	SHPS	biom:CaptureHorizontalPixelDensityValue	0..1

Field ID	Mnemonic	XML element name	Cardinality
-	-	biom:CaptureOrganization	1..1
17.004	SRC	nc:OrganizationIdentification	1..1
17.993	SAN	nc:OrganizationName	0..1
17.023	SVPS	biom:CaptureVerticalPixelDensityValue	0..1
17.030	DMM	biom:CaptureDeviceMonitoringModeCode	0..1
17.013	CSP	biom:ImageColorSpaceCode	0..1
17.021	COM	biom:ImageCommentText	0..1
17.011	CGA	biom:ImageCompressionAlgorithmText	0..1
17.006	HLL	biom:ImageHorizontalLineLengthPixelQuantity	0..1
17.009	THPS	biom:ImageHorizontalPixelDensityValue	0..1
17.024	IQS	biom:ImageQuality	0..9
"	QAP	biom:QualityAlgorithmProductIdentification	1..1
"	QVU	biom:QualityValue	1..1
"	QAV	biom:QualityAlgorithmVendorIdentification	1..1
17.008	SLC	biom:ImageScaleUnitsCode	0..1
17.007	VLL	biom:ImageVerticalLineLengthPixelQuantity	0..1
17.010	TVPS	biom:ImageVerticalPixelDensityValue	0..1
17.003	ELR	biom:IrisEyePositionCode	1..1
17.014	RAE	biom:IrisEyeRotationAngleText	0..1
17.015	RAU	biom:IrisEyeRotationUncertaintyValueText	0..1
17.016	IPC	biom:IrisImageCapture	0..1
"	IHO	biom:IrisImageHorizontalOrientationCode	1..1
"	IST	biom:IrisImageScanCategoryCode	1..1
"	IVO	biom:IrisImageVerticalOrientationCode	1..1
17.020	ECL	biom:IrisEyeColorAttributeCode	0..1
-	-	biom:IrisImageAcquisitionLightingSpectrum	0..1
17.025	EAS	biom:AcquisitionLightingSpectrumCode	0..1
17.027	SSV	-	
"	LOW	biom:AcquisitionLightingSpectrumLowerMeasure	0..1
"	HIG	biom:AcquisitionLightingSpectrumUpperMeasure	0..1
17.026	IRD	biom:IrisDiameterPixelQuantity	0..1
17.028	DME	biom:IrisImageMissingReasonCode	0..1
17.031	IAP	biom:IrisImageAcquisitionProfileCode	0..1
17.032	ISF	biom:IrisImageStorageFormatCode	0..1
17.033	IPB	biom:IrisImageIrisPupilBoundary	0..1
"	BYC	biom:IrisBoundaryShapeCode	1..1
"	NOP	biom:ImageFeatureVertexQuantity	1..1

Field ID	Mnemonic	XML element name	Cardinality
"	-	biom:ImageFeatureVertex	2..99
"	HPO	biom:PositionHorizontalCoordinateValue	1..1
"	VPO	biom:PositionVerticalCoordinateValue	1..1
17.034	ISB	biom:IrisImageIrisScleraBoundary	0..1
"	BYC	biom:IrisBoundaryShapeCode	1..1
"	NOP	biom:ImageFeatureVertexQuantity	1..1
"	-	biom:ImageFeatureVertex	2..99
"	HPO	biom:PositionHorizontalCoordinateValue	1..1
"	VPO	biom:PositionVerticalCoordinateValue	1..1
17.035	UEB	biom:IrisImageIrisUpperEyelidBoundary	0..1
"	BYC	biom:IrisBoundaryShapeCode	1..1
"	NOP	biom:ImageFeatureVertexQuantity	1..1
"		biom:ImageFeatureVertex	3..99
"	HPO	biom:PositionHorizontalCoordinateValue	1..1
"	VPO	biom:PositionVerticalCoordinateValue	1..1
17.036	LEB	biom:IrisImageIrisLowerEyelidBoundary	0..1
"	BYC	biom:IrisBoundaryShapeCode	1..1
"	NOP	biom:ImageFeatureVertexQuantity	1..1
"	-	biom:ImageFeatureVertex	3..99
"	HPO	biom:PositionHorizontalCoordinateValue	1..1
"	VPO	biom:PositionVerticalCoordinateValue	1..1
17.037	NEO	biom:IrisImageOcclusion	0..*
"	OCY	biom:IrisImageOcclusionOpacityCode	1..1
"	OCT	biom:IrisImageOcclusionCategoryCode	1..1
"	NOP	biom:ImageFeatureVertexQuantity	1..1
"	-	biom:ImageFeatureVertex	3..99
"	HPO	biom:PositionHorizontalCoordinateValue	1..1
"	VPO	biom:PositionVerticalCoordinateValue	1..1
17.040	RAN	biom:IrisImageRangeMeasure	0..1
17.041	GAZ	biom:IrisImageGazeAngleMeasure	0..1

Type-18

Field ID	Mnemonic	XML element name	Cardinality
		itl:PackageDNARecord	0..*
18.001	-	biom:RecordCategoryCode	1..1
18.002	IDC	biom:ImageReferenceIdentification	1..1
18.992 ⁸⁹	T2C	biom:Type2CrossReferenceIdentification	1..1

Field ID	Mnemonic	XML element name	Cardinality
18.200-18.900	UDF	itl:UserDefinedFields ⁹⁰	0..*
18.902	ANN	biom:ProcessAnnotation	0..*
"	GMT	biom:ProcessUTCDate	1..1
"	NAV	biom:ProcessName	1..1
"	OWN	biom:ProcessOwnerText	1..1
"	PRO	biom:ProcessDescriptionText	1..1
18.995	ASC	biom:AssociatedContext	0..255
"	ACN	biom:ContextIdentification	1..1
"	ASP	biom:ImageSegmentIdentification	0..1
-	-	biom:DNASample	1..1
-	-	biom:BiometricCaptureDetail	1..1
18.998	GEO	biom:CaptureLocation	0..1
"	GRT	nc:LocationDescriptionText	0..*
"	-	nc:LocationGeographicElevation	0..1
"	ELE	nc:MeasurePointValue	1..1
"	-	biom:LocationTwoDimensionalGeographicCoordinate	0..1
"	-	nc:GeographicCoordinateLatitude	1..1
"	LTD	nc:LatitudeDegreeValue	1..1
"	LTM	nc:LatitudeMinuteValue	0..1
"	LTS	nc:LatitudeSecondValue	0..1
"	-	nc:GeographicCoordinateLongitude	1..1
"	LGD	nc:LongitudeDegreeValue	1..1
"	LGM	nc:LongitudeMinuteValue	0..1
"	LGS	nc:LongitudeSecondValue	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemCode ³⁵	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemName ³⁶	0..1
"	-	nc:LocationUTMCoordinate	0..1
"	GCE	nc:UTMEastingValue	1..1
"	GCM	nc:UTMGridZoneID	1..1

[89[2013n>] New Field [<2013n]

90 This element is abstract and must be substituted with a user-defined element.

Field ID	Mnemonic	XML element name	Cardinality
"	GCN	nc:UTMNorthingValue	1..1
"	-	biom:LocationAlternateGeographicSystemValue	0..1
"	OSI	biom:GeographicLocationSystemName	1..1
"	OCV	biom:GeographicLocationText	1..1
"	UTE	biom:CaptureUTCDateTime	0..1
18.013	SCD	biom:CaptureDate	1..1
-	-	biom:CaptureOrganization	1..1
18.004	SRC	nc:OrganizationIdentification	1..1
18.993	SAN	nc:OrganizationName	0..1
18.003	DLS	biom:DNALaboratory	1..1
"	NOO	nc:OrganizationName	0..1
"	-	nc:OrganizationPrimaryContactInformation	0..1
"	POC	nc>ContactInformationDescriptionText	1..1
"	UTY	biom:DNALaboratoryUnitCategoryCode	1..1
"	LTY	biom:DNALaboratoryCategoryCode	0..1
"	ACC	biom:DNALaboratoryAccreditation ⁹¹	0..6
"	"	biom:DNALaboratoryAccreditationLevelCode	1..1
"	"	biom:DNALaboratoryAccreditationScopeCode	0..4
"	CSC	biom:DNALaboratoryProcessingCountryISO3166Alpha2Code ⁹²	0..1
"	CSC	biom:DNALaboratoryProcessingCountryISO3166Alpha3Code ⁹³	0..1
"	CSC	biom:DNALaboratoryProcessingCountryISO3166NumericCode ⁹⁴	0..1
"	CSC	biom:DNALaboratoryProcessingCountryGENCAgentAlpha2Code ⁹⁵	0..1
"	CSC	biom:DNALaboratoryProcessingCountryGENCAgentAlpha3Code ⁹⁶	0..1
"	CSC	biom:DNALaboratoryProcessingCountryGENCNumericCode ⁹⁷	0..1

⁹¹ Each instance of this element represents one of the comma-separated values described in the specification [2013a] for a maximum of 6 [<2013a].

⁹² Used for 2-character representations of ISO 3166-1.

⁹³ Used for 3-character representations of ISO 3166-1.

⁹⁴ Used for numeric representations of ISO 3166-1.

⁹⁵ [2013n] Used for 2-character representations of GENC.[<2013n]

⁹⁶ [2013n] Used for 3-character representations of GENC.[<2013n]

⁹⁷ [2013n] Used for numeric representations of GENC.[<2013n]

Field ID	Mnemonic	XML element name	Cardinality
"	ION	biom:DNALaboratoryInternationalOrganizationName	0..1
18.005	NAL	biom:DNAAnalysisQuantityCode	1..1
18.006	SDI	biom:DNADonor	1..1
"	DOB	nc:PersonBirthDate	0..1
"	EGP	nc:PersonEthnicityText	0..1
"	GID	nc:PersonSexCode	0..1
"	DSD	biom:DNADonorCategoryCode	1..1
"	DLC	biom:DNADonorLastContactDate	0..1
"	DRA	biom:DNADonorDentalRecordsAvailableCode	0..1
"	LLC	biom:DNADonorCollectionLocationDescriptionText	0..1
"	SDS	biom:DNADonorStatusCode	0..1
18.007	COPR	biom:DNAClaimedRelationshipCode	0..1
18.008	VRS	biom:DNAValidatedRelationshipCode	0..1
18.009	PED	biom:DNAPedigree	0..1
"	PID	biom:DNAPedigreeIdentification	1..1
"	PMI	biom:DNAPedigreeMemberIdentification	1..1
"	PMS	biom:DNAPedigreeMemberStatusCode	1..1
"	SID	biom:DNAPedigreeSampleIdentification	1..1
"	FID	biom:DNAPedigreeFatherIdentification	0..1
"	MID	biom:DNAPedigreeMotherIdentification	0..1
"	PCM	biom:DNAPedigreeCommentText	0..1
18.010	STY	biom:DNASampleOrigin	1..1
"	SCT	biom:DNACellularCategoryCode	1..1
"	SMO	biom:DNASampleOriginCode	0..1
18.011	STI	biom:DNATypingTechnologyCategoryCode	1..5 ⁹⁸
18.012	SCM	biom:DNASampleCollectionMethodText	0..1
18.014	PSD	biom:DNAProfileStorageDate	1..1
18.015	DPD	biom:DNAProfile	1..1
"	PTP	biom:DNAProfileCategoryCode	1..1
"	RES	biom:DNAProfileResultCode	0..1
"	PRF	biom:DNAProfileIdentification	1..1
"	SUP	biom:DNAProfileSupplementalText	0..1
"	DPC	biom:DNAProfileCommentText	0..1
18.016	STR	biom:DNASTRProfile	0..*
"	DST	biom:DNASTRProfileCategoryCode	1..1
"	DLR	biom:DNALocusIdentification	1..1

Field ID	Mnemonic	XML element name	Cardinality
"	ALL	biom:DNAAlleleIndicator	1..1
"	LAI	biom:DNALocusAnalysisIndicator	1..1
"	PCDT	biom:DNAPreciseCallIndicator	1..1
"	AL1	biom:DNAAlleleCall1Text	0..1
"	AL2	biom:DNAAlleleCall2Text	0..1
"	AL3	biom:DNAAlleleCall3Text	0..1
"	BID	biom:DNABatchIdentification	0..1
"	ECR	biom:DNAElectropherogramIdentification	0..1
"	LCR	biom:DNAElectropherogramLadderIdentification	0..1
"	-	biom:DNAKit	1..1
"	KID	biom:DNAKitIdentification	1..1
"	KNM	biom:DNAKitName	0..1
"	KMF	biom:DNAKitManufacturerName	0..1
"	KDS	biom:DNAKitDescriptionText	0..1
18.017	DMD	biom:DNAMitochondrialData	0..1
"	MT1	biom:DNAMitoControlRegion1Text	1..1
"	MT2	biom:DNAMitoControlRegion2Text	1..1
"	BSP	biom:DNAMitoBaseStartNumeric	1..1
"	BEP	biom:DNAMitoBaseEndNumeric	1..1
"	BCA	biom:DNAMitoBaseAdenineQuantity	1..1
"	BCG	biom:DNAMitoBaseGuanineQuantity	1..1
"	BCC	biom:DNAMitoBaseCytosineQuantity	1..1
"	BCT	biom:DNAMitoBaseThymineQuantity	1..1
18.018	UDP	biom:DNAUserDefinedProfile ⁹⁹	0..*
18.019	EPD	biom:DNAElectropherogram	0..*
"	EIR	biom:DNAElectropherogramIdentification	1..1
"	EST	biom:DNAElectropherogramFileStorageText	1..1
"	IDD	biom:DNAElectropherogramDataDescriptionText	1..1
"	ELPD	biom:DNAElectropherogramBinaryObject	1..1
"	-	biom:DNAElectropherogramScreenshotImage	0..1
"	EPS	nc:BinaryBase64Object	1..1
18.023	EPL	biom:DNAElectropherogramLadder	0..*
"	LIR	biom:DNAElectropherogramIdentification	1..1
"	LST	biom:DNAElectropherogramFileStorageText	1..1
"	LDL	biom:DNAElectropherogramDataDescriptionText	1..1
"	LEPD	biom:DNAElectropherogramBinaryObject	1..1

⁹⁹ This element is abstract and must be substituted with a user-defined element.

Field ID	Mnemonic	XML element name	Cardinality
"	-	biom:DNAElectropherogramScreenshotImage	0..1
"	LES	nc:BinaryBase64Object	1..1
18.020	DGD	biom:DNAGenotypeDistributionCode	0..1
18.021	GAP	biom:DNAGenotypeAllelePair	0..*
"	GLR	biom:DNALocusIdentification	1..1
"	ALP	biom:DNAGenotypeAllelePairText	1..1
"	GNW	biom:DNAGenotypeWeightNumeric	1..1
18.022	COM	biom.DNACommentText	0..1

Type-19

Field ID	Mnemonic	XML element name	Cardinality
		itl:PackagePlantarImageRecord	0..*
19.001	-	biom:RecordCategoryCode	1..1
19.002	IDC	biom:ImageReferenceIdentification	1..1
19.200- 19.900	UDF	itl:UserDefinedFields ⁹⁹	0..*
19.902	ANN	biom:ProcessAnnotation	0..*
"	GMT	biom:ProcessUTCDate	1..1
"	NAV	biom:ProcessName	1..1
"	OWN	biom:ProcessOwnerText	1..1
"	PRO	biom:ProcessDescriptionText	1..1
19.995	ASC	biom:AssociatedContext	0..255
"	ACN	biom:ContextIdentification	1..1
"	ASP	biom:ImageSegmentIdentification	0..1
19.996	HAS	biom:ImageHashValue	0..1
19.997	SOR	biom:SourceRepresentation	0..255
"	SRN	biom:SourceIdentification	1..1
"	RSP	biom:ImageSegmentIdentification	0..1
-	-	biom:PlantarImage	1..1
19.999	DATA	nc:BinaryBase64Object	0..1
19.012	BPX	biom:ImageBitsPerPixelQuantity	0..1
-	-	biom:ImageCaptureDetail	1..1
19.998	GEO	biom:CaptureLocation	0..1
"	GRT	nc:LocationDescriptionText	0..*
"	-	nc:LocationGeographicElevation	0..1
"	ELE	nc:MeasurePointValue	1..1

Field ID	Mnemonic	XML element name	Cardinality
"	-	biom:LocationTwoDimensionalGeographicCoordinate	0..1
"	-	nc:GeographicCoordinateLatitude	1..1
"	LTD	nc:LatitudeDegreeValue	..1
"	LTM	nc:LatitudeMinuteValue	0..1
"	LTS	nc:LatitudeSecondValue	0..1
"	-	nc:GeographicCoordinateLongitude	1..1
"	LGD	nc:LongitudeDegreeValue	1..1
"	LGM	nc:LongitudeMinuteValue	0..1
"	LGS	nc:LongitudeSecondValue	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemCode ³⁵	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemName ³⁶	0..1
"	-	nc:LocationUTMCoordinate	0..1
"	GCE	nc:UTMEastingValue	1..1
"	GCM	nc:UTMGridZoneID	1..1
"	GCN	nc:UTMNorthingValue	1..1
"	-	biom:LocationAlternateGeographicSystemValue	0..1
"	OSI	biom:GeographicLocationSystemName	1..1
"	OCV	biom:GeographicLocationText	1..1
"	UTE	biom:CaptureUTCDateTime	0..1
19.005	PCD	biom:CaptureDate	1..1
19.903	DUI	biom:CaptureDeviceIdentification	0..1
19.904	MMS	-	
"	MAK	biom:CaptureDeviceMakeText	0..1
"	MOD	biom:CaptureDeviceModelText	0..1
"	SER	biom:CaptureDeviceSerialNumberText	0..1
19.016	SHPS	biom:CaptureHorizontalPixelDensityValue	0..1
-	-	biom:CaptureOrganization	1..1
19.004	SRC	nc:OrganizationIdentification	1..1
19.993	SAN	nc:OrganizationName	0..1
19.017	SVPS	biom:CaptureVerticalPixelDensityValue	0..1
19.030	DMM	biom:CaptureDeviceMonitoringModeCode	0..1
19.020	COM	biom:ImageCommentText	0..1
19.011	CGA	biom:ImageCompressionAlgorithmText	0..1

Field ID	Mnemonic	XML element name	Cardinality
19.006	HLL	biom:ImageHorizontalLineLengthPixelQuantity	0..1
19.009	THPS	biom:ImageHorizontalPixelDensityValue	0..1
19.008	SLC	biom:ImageScaleUnitsCode	0..1
19.007	VLL	biom:ImageVerticalLineLengthPixelQuantity	0..1
19.010	TVPS	biom:ImageVerticalPixelDensityValue	0..1
19.003	IMP	biom:FingerprintImageImpressionCaptureCategoryCode	1..1
19.013	FGP	biom:PlantarPositionCode	1..1
19.018	AMP	biom:PlantarImageMissingArea	0..8
"	FRAP	biom:PlantarPositionCode	1..1
"	ABC	biom:PlantarMissingAreaReasonCode	1..1
19.024	FQM	biom:PlantarImageQuality	0..9
"	FRMP	biom:PlantarPositionCode	1..1
"	QAP	biom:QualityAlgorithmProductIdentification	1..1
"	QAV	biom:QualityAlgorithmVendorIdentification	1..1
"	QVU	biom:QualityValue	1..1
19.019	FSP	biom:PlantarImageSegmentPositionPolygon	0..5
"	FRSP	biom:PlantarPositionCode	1..1
"	NOP	biom:PositionPolygonVertexQuantity	1..1
"	-	biom:PositionPolygonVertex	3..99
"	HPO	biom:PositionHorizontalCoordinateValue	1..1
"	VPO	biom:PositionVerticalCoordinateValue	1..1
19.021 ¹⁰⁰	SEG	biom:FingerprintImageSegmentPositionSquare	0..17
"	FRSP	biom:FingerPositionCode	1..1
"	BVC	biom:SegmentBottomVerticalCoordinateValue	1..1
"	LHC	biom:SegmentLeftHorizontalCoordinateValue	1..1
"	RHC	biom:SegmentRightHorizontalCoordinateValue	1..1
"	TVC	biom:SegmentTopVerticalCoordinateValue	1..1
19.046 ¹⁰¹	SUB	biom:SubjectExistentialDetails	0..1
"	SSC	biom:SubjectExistentialStatusCode	1..1
"	SBSC	biom:SubjectBodyStatusCode	0..1
"	SBCC	biom:SubjectBodyClassCode	0..1
19.047 ¹⁰²	CON	nc:OrganizationUnitName	0..1

100 [2013n>] New Field [<2013n]

101 [2013n>] New Field [<2013n]

Field ID	Mnemonic	XML element name	Cardinality

Type-20

Field ID	Mnemonic	XML element name	Cardinality
		itl:PackageSourceRepresentationRecord	0..*
20.001	-	biom:RecordCategoryCode	1..1
20.002	IDC	biom:ImageReferenceIdentification	1..1
20.100- 20.900	-	itl:UserDefinedFields ¹⁰³	0..*
20.902	ANN	biom:ProcessAnnotation	0..*
"	GMT	biom:ProcessUTCDate	1..1
"	NAV	biom:ProcessName	1..1
"	OWN	biom:ProcessOwnerText	1..1
"	PRO	biom:ProcessDescriptionText	1..1
20.995	ASC	biom:AssociatedContext	0..255
"	ACN	biom:ContextIdentification	1..1
"	ASP	biom:ImageSegmentIdentification	0..1
20.996	HAS	biom:ImageHashValue	0..1
20.003	CAR	biom:SourceRecordCardinalityCode	1..1
20.014	AQS	biom:SourceAcquisition	1..9
"	AQT	biom:AcquisitionSourceCode	1..1
"	A2D	biom:AcquisitionDigitalConversionDescriptionText	0..1
"	FDN	biom:AcquisitionFormatDescriptionText	0..1
"	AQSC	biom:AcquisitionSpecialCharacteristicsText	0..1
20.015	SFT	biom:SourceFileFormat	1..1
"	FTY	biom:SourceFileCategoryText	1..1
"	DEI	biom:SourceFileDecodingInstructionsText	0..1
20.020	COM	biom:SourceCommentText	0..1
20.021	SRN	biom:SourceIdentification	1..1
20.994	EFR	biom:SourceExternalFileReferenceText	0..1
-		biom:SourceImage ¹⁰⁴	0..1 ¹⁰⁵
-		biom:SourceAudio ¹⁰⁶	0..1

[102 [2013n>] New Field [<2013n]

103 This element is abstract and must be substituted with a user-defined element.

104 Use this element if the source is a still image.

105 One and only one of biom:SourceImage, biom:SourceAudio or biom:SourceVideo must appear.

106 Use this element if the source is an audio file.

Field ID	Mnemonic	XML element name	Cardinality
-		biom:SourceVideo ¹⁰⁷	0..1
20.999	DATA	nc:BinaryBase64Object	0..1
20.012	BPX	biom:ImageBitsPerPixelQuantity	0..1
	-	biom:BiometricCaptureDetail ¹⁰⁸	0..1
	-	biom:ImageCaptureDetail ¹⁰⁴	0..1
20.998	GEO	biom:CaptureLocation	0..1
"	GRT	nc:LocationDescriptionText	0..*
"	-	nc:LocationGeographicElevation	0..1
"	ELE	nc:MeasurePointValue	1..1
"	-	biom:LocationTwoDimensionalGeographicCoordinate	0..1
"	-	nc:GeographicCoordinateLatitude	1..1
"	LTD	nc:LatitudeDegreeValue	1..1
"	LTM	nc:LatitudeMinuteValue	0..1
"	LTS	nc:LatitudeSecondValue	0..1
"	-	nc:GeographicCoordinateLongitude	1..1
"	LGD	nc:LongitudeDegreeValue	1..1
"	LGM	nc:LongitudeMinuteValue	0..1
"	LGS	nc:LongitudeSecondValue	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemCode ³⁵	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemName ³⁶	0..1
"	-	nc:LocationUTMCoordinate	0..1
"	GCE	nc:UTMEastingValue	1..1
"	GCM	nc:UTMGridZoneID	1..1
"	GCN	nc:UTMNorthingValue	1..1
"	-	biom:LocationAlternateGeographicSystemValue	0..1
"	OSI	biom:GeographicLocationSystemName	1..1
"	OCV	biom:GeographicLocationText	1..1
"	UTE	biom:CaptureUTCDate	0..1
20.005	SRD	biom:CaptureDate	0..1
20.903	DUI	biom:CaptureDeviceIdentification	0..1
20.904	MMS	-	

107 Use this element if the source is a video file.

108 Use this element if the source is a video or audio file.

Field ID	Mnemonic	XML element name	Cardinality
"	MAK	biom:CaptureDeviceMakeText	0..1
"	MOD	biom:CaptureDeviceModelText	0..1
"	SER	biom:CaptureDeviceSerialNumberText	0..1
20.017	SHPS	biom:CaptureHorizontalPixelDensityValue	0..1
-	-	biom:CaptureOrganization	1..1
20.004	SRC	nc:OrganizationIdentification	1..1
20.993	SAN	nc:OrganizationName	0..1
20.018	SVPS	biom:CaptureVerticalPixelDensityValue	0..1
20.013	CSP	biom:ImageColorSpaceCode	1..1
20.011	CGA	biom:ImageCompressionAlgorithmText	1..1
20.006	HLL	biom:ImageHorizontalLineLengthPixelQuantity	1..1
20.009	THPS ¹⁰⁹	biom:ImageHorizontalPixelDensityValue	1..1
20.008	SLC	biom:ImageScaleUnitsCode	1..1
20.007	VLL	biom:ImageVerticalLineLengthPixelQuantity	1..1
20.010	TVPS ¹⁰⁹	biom:ImageVerticalPixelDensityValue	1..1
20.016	SEG	biom:ImageSegment	0..99
"	RSP ¹⁰⁹	biom:ImageSegmentIdentification	1..1
"	IPT	biom:ImageSegmentInternalIdentification	1..1
"	NOP	biom:PositionPolygonVertexQuantity	0..1
"	-	biom:PositionPolygonVertex	0..99
"	HPO	biom:PositionHorizontalCoordinateValue	1..1
"	VPO	biom:PositionVerticalCoordinateValue	1..1
20.019	TIX	biom:TimeSegment	1..99
"	TIS	biom:TimeSegmentStartTimeValue	1..1
"	TIE	biom:TimeSegmentEndTimeValue	1..1

Type-21

Field ID	Mnemonic	XML element name	Cardinality
		itl:PackageAssociatedContextRecord	0..*
21.001		biom:RecordCategoryCode	1..1
21.002	IDC	biom:ImageReferenceIdentification	1..1
21.100- 21.900	UDF	itl:UserDefinedFields ¹¹⁰	0..*
21.902	ANN	biom:ProcessAnnotation	0..*

¹⁰⁹ [2013e>] corrected Typographical error [<2013e]

¹¹⁰ This element is abstract and must be substituted with a user-defined element.

Field ID	Mnemonic	XML element name	Cardinality
"	GMT	biom:ProcessUTCDate	1..1
"	NAV	biom:ProcessName	1..1
"	OWN	biom:ProcessOwnerText	1..1
"	PRO	biom:ProcessDescriptionText	1..1
21.996	HAS	biom:ImageHashValue	0..1
21.015	AFT ¹⁰⁹	biom:ContextFileFormat	1..1
"	FTY	biom:ContextFileCategoryText	1..1
"	DEI	biom:ContextFileDecodingInstructionsText	0..1
21.020	COM	biom:ContextCommentText	0..1
21.021	ACN	biom:ContextIdentification	1..1
21.994	EFR	biom:ContextExternalFileReferenceText	0..1
-		biom:ContextImage ¹⁰⁴	0..1 ¹¹¹
-		biom:ContextAudio ¹⁰⁶	0..1
-		biom:ContextVideo ¹⁰⁷	0..1
21.999	DATA	nc:BinaryBase64Object	0..1
	-	biom:BiometricCaptureDetail ¹⁰⁸	0..1
		biom:ImageCaptureDetail ¹⁰⁴	0..1
21.998	GEO	biom:CaptureLocation	0..1
"	GRT	nc:LocationDescriptionText	0..*
"	-	nc:LocationGeographicElevation	0..1
"	ELE	nc:MeasurePointValue	1..1
"	-	biom:LocationTwoDimensionalGeographicCoordinate	0..1
"	-	nc:GeographicCoordinateLatitude	1..1
"	LTD	nc:LatitudeDegreeValue	1..1
"	LTM	nc:LatitudeMinuteValue	0..1
"	LTS	nc:LatitudeSecondValue	0..1
"	-	nc:GeographicCoordinateLongitude	1..1
"	LGD	nc:LongitudeDegreeValue	1..1
"	LGM	nc:LongitudeMinuteValue	0..1
"	LGS	nc:LongitudeSecondValue	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemCode ³⁵	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemName ³⁶	0..1
"	-	nc:LocationUTMCoordinate	0..1

111 One and only one of biom:ContextImage, biom:ContextAudeo or biom:ContextVideo must appear.

Field ID	Mnemonic	XML element name	Cardinality
"	GCE	nc:UTMEastingValue	1..1
"	GCM	nc:UTMGridZoneID	1..1
"	GCN	nc:UTMNorthingValue	1..1
"	-	biom:LocationAlternateGeographicSystemValue	0..1
"	OSI	biom:GeographicLocationSystemName	1..1
"	OCV	biom:GeographicLocationText	1..1
"	UTE	biom:CaptureUTCDate Time	0..1
21.005	ACD	biom:CaptureDate	0..1
-	-	biom:CaptureOrganization	1..1
21.004	SRC	nc:OrganizationIdentification	1..1
21.993	SAN	nc:OrganizationName	0..1
21.016	SEG	biom:ImageSegment	0..99
"	ASP	biom:ImageSegmentIdentification	1..1
"	IPT	biom:ImageSegmentInternalIdentification	1..1
"	NOP	biom:PositionPolygonVertexQuantity	0..1
"	-	biom:PositionPolygonVertex	0..99
"	HPO	biom:PositionHorizontalCoordinateValue	1..1
"	VPO	biom:PositionVerticalCoordinateValue	1..1
21.019	TIX	biom:TimeSegment	1..99
"	TIS	biom:TimeSegmentStartTimeValue	1..1
"	TIE	biom:TimeSegmentEndTimeValue	1..1 ¹⁰⁹
21.006 ¹¹²	MDI	biom:MedicalDeviceInformation	0..1
"	TYP	biom:DeviceTypeText	0..1
"	MAK	biom:CaptureDeviceMakeText	0..1
"	MOD	biom:CaptureDeviceModelText	0..1
"	SER	biom:CaptureDeviceSerialNumberText	0..1
"	COM	nc:CommentText	0..1
21.046 ¹¹³	SUB	biom:SubjectExistentialDetails	0..1
"	SSC	biom:SubjectExistentialStatusCode	1..1
"	SBSC	biom:SubjectBodyStatusCode	0..1
"	SBCC	biom:SubjectBodyClassCode	0..1

¹¹² [2013n>] New Field [<2013n]

¹¹³ [2013n>] New Field [<2013n]

Field ID	Mnemonic	XML element name	Cardinality
21.047 ¹¹⁴	CON	nc:OrganizationUnitName	0..1

Type-22

Field ID	Mnemonic	XML element name	Cardinality
		itl:PackageNonPhotographicImageryRecord	0..*
22.001		biom:RecordCategoryCode	1..1
22.002	IDC	biom:ImageReferenceIdentification	1..1
22.992	T2C	biom:Type2CrossReferenceIdentification	1..1
22.199 22.900	-UDF	itl:UserDefinedFields	0..*
22.902	ANN	biom:ProcessAnnotation	0..*
"	GMT	biom:ProcessUTCDate	1..1
"	NAV	biom:ProcessName	1..1
"	OWN	biom:ProcessOwnerText	1..1
"	PRO	biom:ProcessDescriptionText	1..1
22.995	ASC	biom:AssociatedContext	0..255
"	ACN	biom:ContextIdentification	1..1
"	ASP	biom:ImageSegmentIdentification	0..1
22.997	SOR	biom:SourceRepresentation	0..255
"	SRN	biom:SourceIdentification	1..1
"	RSP	biom:ImageSegmentIdentification	0..1
22.996	HAS	biom:ImageHashValue	0..1
22.999	DATA	nc:BinaryBase64Object	0..1
-	-	biom:BiometricCaptureDetail	1..1

Field ID	Mnemonic	XML element name	Cardinality
22.998	GEO	biom:CaptureLocation	0..1
"	GRT	nc:LocationDescriptionText	0..*
"	-	nc:LocationGeographicElevation	0..1
"	ELE	nc:MeasurePointValue	1..1
"	-	biom:LocationTwoDimensionalGeographicCoordinate	0..1
"	-	nc:GeographicCoordinateLatitude	1..1
"	LTD	nc:LatitudeDegreeValue	1..1
"	LTM	nc:LatitudeMinuteValue	0..1
"	LTS	nc:LatitudeSecondValue	0..1
"	-	nc:GeographicCoordinateLongitude	1..1
"	LGD	nc:LongitudeDegreeValue	1..1
"	LGM	nc:LongitudeMinuteValue	0..1
"	LGS	nc:LongitudeSecondValue	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemCode ³⁵	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemName ³⁶	0..1
"	-	nc:LocationUTMCoordinate	0..1
"	GCE	nc:UTMEastingValue	1..1
"	GCM	nc:UTMGridZoneID	1..1
"	GCN	nc:UTMNorthingValue	1..1
"	-	biom:LocationAlternateGeographicSystemValue	0..1
"	OSI	biom:GeographicLocationSystemName	1..1
"	OCV	biom:GeographicLocationText	1..1
"	UTE	biom:CaptureUTCDateTime	0..1
22.003	ICD	biom:CaptureDate	0..1

Field ID	Mnemonic	XML element name	Cardinality
22.903	DUI	biom:CaptureDeviceIdentification	0..1
22.904	MMS	-	0..1
"	MAK	biom:CaptureDeviceMakeText	1..1
"	MOD	biom:CaptureDeviceModelText	1..1
"	SER	biom:CaptureDeviceSerialNumberText	1..1
22.047	CON	biom:CaptureOrganization	0..1
-	-	biom:SourceAgency	1..1
22.004	SRC	nc:OrganizationIdentification	1..1
22.993	SAN	nc:OrganizationName	0..1
22.005	ICDR	biom:ImageCaptureDateEstimateRange	0..1
22.006	IMT	biom:ImageCategoryCode	1..1
22.020	COM	biom:NonPhotographicImageryCommentText	0..1
22.994	EFR	biom:SourceExternalFileReferenceText	
-		biom:SourceImage ¹¹⁵	0..1 ¹¹⁶
-		biom:SourceAudio ¹¹⁷	0..1
22.046	SUB	biom:SubjectExistentialDetails	0..1
"	SSC	biom:SubjectExistentialStatusCode	1..1
"	SBSC	biom:SubjectBodyStatusCode	0..1
"	SBCC	biom:SubjectBodyClassCode	0..1
22.101	ITYP	biom:NonPhotographicImageTypeCode	1..1
22.102	IFMT	biom:NonPhotographicImageFormatCode	1..1
22.103	DRID	biom:DentalRadiographImageInformation	0..1

¹¹⁵ Use this element if the source is a still image.

¹¹⁶ One and only one of biom:SourceImage, biom:SourceAudio or biom:SourceVideo must appear.

¹¹⁷ Use this element if the source is an audio file.

Field ID	Mnemonic	XML element name	Cardinality
"	RGS	biom:RadiographSize	1..1
"	RIS	biom:RadiographImageSeries	1..1
"	RIIS	biom:RadiographImageSeriesText	0..1
"	RIIT	biom:RadiographImageInformationText	0..1

Type-98

Field ID	Mnemonic	XML element name	Cardinality
		itl:PackageInformationAssuranceRecord	0..*
98.001	-	biom:RecordCategoryCode	1..1
98.002	IDC	biom:ImageReferenceIdentification	1..1
98.200-98.899	UDF	itl:UserDefinedFields ¹¹⁸	0..*
98.003	DFO	biom:AssuranceFormatOwnerIdentification	1..1
-	-	biom:AssuranceOrganization	1..1
98.004	SRC	nc:OrganizationIdentification	1..1
98.993	SAN	nc:OrganizationName	0..1
98.005	DFT	biom:AssuranceFormatIdentification	1..1
98.006	DCD	biom:AssuranceDateTime	1..1
98.900	ALF	biom:AssuranceLogEntry	0..*
"	EVT	biom:AssuranceLogEventCode	1..1
"	EVR	biom:AssuranceLogEventReasonText	0..1
"	IID	biom:AssuranceLogEventLocationText	1..1
"	AGT	biom:AssuranceLogAgentText	1..1
"	OLD	biom:AssuranceLogEventOriginalValueText	0..1
98.901	ARN	biom:AssuranceAuditRevisionIdentification	0..1

Type-99

Field ID	Mnemonic	XML element name	Cardinality
		itl:PackageCBEFFBiometricDataRecord	0..*
99.001		biom:RecordCategoryCode	1..1
99.002	IDC	biom:ImageReferenceIdentification	1..1
99.200-99.900	UDF	itl:UserDefinedFields ¹¹⁸	0..*

118 This element is abstract and must be substituted with a user-defined element.

Field ID	Mnemonic	XML element name	Cardinality
99.902	ANN	biom:ProcessAnnotation	0..*
"	GMT	biom:ProcessUTCDate	1..1
"	NAV	biom:ProcessName	1..1
"	OWN	biom:ProcessOwnerText	1..1
"	PRO	biom:ProcessDescriptionText	1..1
99.995	ASC	biom:AssociatedContext	0..255
"	ACN	biom:ContextIdentification	1..1
"	ASP	biom:ImageSegmentIdentification	0..1
99.996	HAS	biom:ImageHashValue	0..1
99.997	SOR	biom:SourceRepresentation	0..255
"	SRN	biom:SourceIdentification	1..1
"	RSP	biom:ImageSegmentIdentification	0..1
-		biom:CBEFFImage	1..1
99.999	DATA	nc:BinaryBase64Object	1..1
-		biom:ImageCaptureDetail	1..1
99.998	GEO	biom:CaptureLocation	0..1
"	GRT	nc:LocationDescriptionText	0..*
"	-	nc:LocationGeographicElevation	0..1
"	ELE	nc:MeasurePointValue	1..1
"	-	biom:LocationTwoDimensionalGeographicCoordinate	0..1
"	-	nc:GeographicCoordinateLatitude	1..1
"	LTD	nc:LatitudeDegreeValue	1..1
"	LTM	nc:LatitudeMinuteValue	0..1
"	LTS	nc:LatitudeSecondValue	0..1
"	-	nc:GeographicCoordinateLongitude	1..1
"	LGD	nc:LongitudeDegreeValue	1..1
"	LGM	nc:LongitudeMinuteValue	0..1
"	LGS	nc:LongitudeSecondValue	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemCode ³⁵	0..1
"	GDC	biom:GeodeticDatumCoordinateSystemName ³⁶	0..1
"	-	nc:LocationUTMCoordinate	0..1
"	GCE	nc:UTMEastingValue	1..1
"	GCM	nc:UTMGridZoneID	1..1

Field ID	Mnemonic	XML element name	Cardinality
"	GCN	nc:UTMNorthingValue	1..1
"	-	biom:LocationAlternateGeographicSystemValue	0..1
"	OSI	biom:GeographicLocationSystemName	1..1
"	OCV	biom:GeographicLocationText	1..1
"	UTE	biom:CaptureUTCDateTime	0..1
99.005	BCD	biom:CaptureDate	1..1
99.903	DUI	biom:CaptureDeviceIdentification	0..1
99.904	MMS	-	
"	MAK	biom:CaptureDeviceMakeText	0..1
"	MOD	biom:CaptureDeviceModelText	0..1
"	SER	biom:CaptureDeviceSerialNumberText	0..1
-	-	biom:CaptureOrganization	1..1
99.004	SRC	nc:OrganizationIdentification	1..1
99.993	SAN	nc:OrganizationName	0..1
99.102	BDQ	biom:ImageQuality	0..9
"	QAP	biom:QualityAlgorithmProductIdentification	1..1
"	QVU	biom:QualityValue	1..1
"	QAV	biom:QualityAlgorithmVendorIdentification	1..1
99.103	BFO	biom:CBEFFFFormatOwnerIdentification	1..1
99.104	BFT	biom:CBEFFFFormatCategoryIdentification	1..1
99.100	HDV	biom:CBEFFVersionIdentification	1..1
99.101	BTY	biom:CBEFFCategoryCode	1..1